THE JOURNAL OF LAND & PUBLIC UTILITY ECONOMICS

OLUME XI NUMBER 3 AUGUST, 1935 PRICE $1.25 A COPY

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THE JOURNAL OF LAND & PUBLIC UTILITY ECONOMICS

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PUBLISHED QUARTERLY BY NORTHWESTERN UNIVERSITY

Publication offices: 121 South Pinckney Street, Madison, Wis.

Editorial and General offices: Northwestern University, School of Commerce, 337 East Chicago Ave., Chicago, Ill.

The contents of the *Journal* are indexed in the *Industrial Arts Index*.

Entered as second-class matter, January 5, 1925, at the post-office at Madison, Wis., under the Act of Congress of March 3, 1879. Acceptance for mailing at special rate of postage provided for in section 1103, Act of October 3, 1917, authorized October 12, 1922. Printed in the United States of America.

Subscription Rates: $5 a year; $1.25 a copy. Remittances may be made by personal checks, drafts, post-office or express money orders, payable to the Journal of Land & Public Utility Economics.

Agents of the *Journal* in Great Britain, B. F. Stevens & Brown, Ltd., 28-30 Little Russell St., British Museum, London, W. C. 1.

Advertising rates furnished on application.

THE JOURNAL OF LAND & PUBLIC UTILITY ECONOMICS

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Published by Northwestern University

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THE JOURNAL OF
LAND & PUBLIC UTILITY
ECONOMICS

AUGUST
1935

VOLUME XI
NUMBER 3

A Sound System of Mortgage Credits and Its Relation to Banking Policy

By MORTON BODFISH*

BOTH the banking and the mortgage credit systems of the United States need additional study and perfection in light of the recent credit collapse. On this point there is universal agreement. Certain steps designed to strengthen the banking and mortgage structure have already been taken. Since 1932 legislation has been passed for the insurance of deposits and savings accounts, elimination of security affiliates, and the establishment by state and Federal law of restrictive general policies for the operation of both commercial banks and savings institutions.

Now still further suggestions for revamping the banking system of the country are under consideration and are incorporated in the proposed Banking Act of 1935[1] which is at present before the Congress of the United States. Only two of the many important provisions of this proposed legislation have been selected for examination here, because of their special bearing upon the relation of mortgage credit to general banking policy. I refer to Sections 206 and 210 of the proposed act; and of these, major attention will be focussed on Section 210.

In brief, Section 210 removes the territorial limitations on real estate loans by commercial banks; authorizes them to make long-term real estate loans; substantially relaxes the present restriction as to the amount each bank may so invest; and also materially raises the percentage of loan to value of the property offered for security.

Section 206, in turn, relates the possible expansion of real estate lending to the Federal Reserve system. In essence, it authorizes the Federal Reserve banks to lend to member banks

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The substance of this statement was presented as testimony before the Subcommittee of the United States Senate Committee on Banking and Currency, May 30, 1935.

[1] S. 1715 and H. R. 7617.

on "any sound asset" without regard to its qualification as commercial or short-term paper or without regard to stress or emergency conditions.

Specialization of Functions

Examination of past proposals and policies for recasting the credit systems of this country emphasizes one outstanding principle of such programs which has special significance for this discussion—namely, that short-term or commercial-credit institutions should not engage in long-term mortgage or capital-credit activities. This sound principle has been observed elsewhere and explains in some part the stability enjoyed by the banking structure of other countries, notably Great Britain and Sweden. Section 210 of the proposed Banking Act of 1935, supplemented by Section 206, proposes to continue and encourage mortgage activities by commercial banks. The proposal would not only violate the above mentioned banking principle, but the pursuance of such a policy is generally admitted to have played a dominant role in the recent overexpansion and collapse of credit. This overexpansion in long-term credits led to numerous bank failures and to a discouraging freezing of mortgage credit. Economic historians will certainly record the banking failures of recent years as the major factor causing unprecedented price declines, rapid credit liquidation, business failures, and acute general depression. Everything practicable should be done to prevent a recurrence of these events.

It is generally felt that the failure of state bank guarantee systems was largely the result of real estate mortgage lending activities on the part of the less experienced bankers, particularly in farm mortgages. The dramatic bank failures in Detroit and Chicago and many other localities were convincing evidence that extensive mortgage lending by commercial banks was not sound banking. The depression experience clearly indicates that a bank failure leads to loss of confidence and difficulty in other types of financial institutions, while banks, in turn, are adversely affected when savings or investment institutions encounter difficulty. It would seem proper, therefore, that public policy should more and more restrict the activities of savings institutions—such as building and loan associations, savings banks, and insurance companies—to those which have been proved by experience to be appropriate and safe, while at the same time drawing similar, rigorous, statutory limits about the field of activity of commercial banks.

Examples of the satisfactory results of such a policy in foreign countries could be cited, but it is necessary only to point to New England territory, where the separation of commercial from savings banking is considered "theoretically desirable" and is largely carried out. There we have had a comparatively stronger and more stable financial structure than in other parts of the country. The concepts of division of labor and specialization are as useful, as sound, and as vital in the field of finance as in industry and trade. A great and sound step in public policy was taken in the divorcement of security merchandising from commercial banking. The judgment of many is that equally compelling logic and experience call for similar action in separating commercial banking from long-term mortgage financing.

The Role of Commercial Banks

The primary function of the national banking structure has been to serve the commercial credit needs of the nation.

Many thoughtful bankers and observers doubted the wisdom of the McFadden Act, which substantially accelerated the participation of national banks in the mortgage field.[2] The records from 1920 up to the beginning of the recent banking difficulties indicate a sweeping expansion in mortgage loans by commercial banks.[3] A question again arises as to whether the country and its financial structure would not be in a better position if we were to develop strong but entirely separate managements, directorates, and trustees, each functioning in individual lines of activity.

Commercial banking and mortgage financing are distinct and different, and specialization rather than department-store activity should be encouraged as a matter of public policy. Commercial banks deal primarily with manufacturers, jobbers, retailers, or men who own business institutions. Mortgage credits, on the other hand, are unique, dealing with a more personal risk, an entirely different repayment arrangement, a special field of law and business practice, and a particular type of security. Thus the two kinds of institutions serve two distinct credit needs and the types of funds which they use can, and should be, related to the type of credit which they advance. Borrowers as well as savers in both institutions will be best served if the activities of each are confined to its own field.

To the extent, however, that commercial banks accept savings and time deposits they may perhaps legitimately finance somewhat longer term credit demands than the usual 30-, 60-, or 90-day commercial paper. But if the banking institutions of the country are to be encouraged to make these longer term investments, then the most needed public service which they can render and which they should be best, if not exclusively, equipped to render, is that of capital loans to large and small businesses. I have in mind financing running from one to three, or possibly even to five, years. This is a field unserved by private capital at the present time and one more appropriate than long-term mortgages for the employment of demand or time deposits of commercial banking institutions. This type of loan offers a profitable outlet and recent investigation has clearly indicated the need of such intermediate credit for business.

With the commercial banking structure taking care of the intermediate credit demands of business, then mortgage or savings institutions can supply the really long-term needs of the country. Some of us have given considerable study to the problem of building a mortgage credit structure which would better serve the needs of property ownership, and at the same time resist the acute conditions recently experienced. A very cornerstone of this thinking is the common sense proposition that, if long-term, non-liquid mortgage loans are to be safely made, they must flow from long-term savings or investment capital, rather than from funds of depositors who expect money on demand, or, at most, on short notice.

[2] The McFadden Act (1927), amending the Federal Reserve Act, permitted national banks to invest part of their funds (25% of capital and surplus or 50% of time (and savings) deposits (whichever is larger) in five-year, 50% first mortgages on improved city real estate.

[3] Real estate loans by member banks of the Federal Reserve System rose from $953,000,000 in 1920 to $3,218,000,000 in 1931. Even more spectacular was the increase in such loans by national banks from $230,000,000 in 1920 to $1,585,000,000 in 1931 (with a sharp jump between 1926 and 1927 from $725,000,000 to $1,026,000,000 as a result of the passage of the McFadden Act in the latter year). ("A Critical Analysis of the Book by Lauchlin Currie, Ph. D.," by Benjamin M. Anderson, Jr., p. 6, April 26, 1935.)

The Present Situation

The Banking Act of 1933 moved in the direction of restricting banking institutions to commercial credit activities, while at the same time a long-term mortgage credit system was being developed through Federal and state legislation affecting building and loan associations and other types of long-term, trustee, or savings institutions.[4] The program was varied and sound, and it is believed that the instrumentalities for furnishing adequate home mortgage credit have been created. They will function satisfactorily at such time as real estate prices, employment, and other conditions urge citizens to use credit extensively for building or buying homes. Statistical evidence shows that lending activity on the part of trustee institutions has doubled in 1935 as compared with the corresponding period in 1934. My considered judgment is that the Congress might better encourage and aid these institutions to greater activity than desert a sound banking principle in regard to mortgage lending in order to employ temporarily idle banking capital.

Commercial banking institutions have large sums today at interest costs ranging from nothing to 2%. These funds are piled up for three reasons: (1) because the public feels their funds to be safe, as a result of the confidence established through the Federal Deposit Insurance Corporation; (2) because the public believes that their funds are available on demand or when they want them; and (3) because of the small present demand for ordinary commercial or business credits.

The desire of commercial banks for earnings on these funds at present unused is well known and may be a primary consideration prompting this proposal for liberalization of bank lending policies. In the opinion of the writer, however, the fact that the public would prefer under present conditions to have its funds on a creditor basis, where safety and availability on demand are practically guaranteed by insurance, is no reason for encouraging banking institutions to undertake unsound lending operations. The situation raises the fundamental question of types of capital, particularly long- and short-term funds. It suggests clearly distinguishing these two kinds of capital and rewarding them in accordance with their productivity and the character of their investment rather than continuing the intermingling of the two types of funds.

Again, the rates which depositors have accepted for commercial bank savings convincingly suggest that they expect to get their money either upon demand or upon too short notice to justify its investment in long-term real estate mortgages. Those funds in commercial banks which are obviously demand funds in the minds of the public must be so husbanded and employed that the bank can meet any demand when less favorable circumstances develop. If such deposits bought at demand prices are invested in real estate mortgages in large amounts, the result is not only a perilous and deceptive banking structure,[5] but a situation in

[4] Reference is to (1) Federal Home Loan Bank Act, (2) the Section in the Home Owners' Loan Act of 1933 providing for federal savings and loan associations, (3) completion and perfection of numerous state statutes governing thrift and home-financing institutions, and (4) Title IV of the National Housing Act creating the Federal Savings and Loan Insurance Corporation. Admittedly little has been attempted with regard to large-unit, commercial, income, or special-purpose mortgages aside from the recent activities of the Reconstruction Finance Corporation and the Federal Housing Administration.

[5] A pertinent query on this point is raised in the *Guaranty Survey* (published by the Guaranty Trust Company of New York) for May 27, 1935, page 1:

(*Footnote 5 continued on page 221*)

which the savings or long-term investment institutions are unfairly placed at a disadvantage in carrying out their normal functions.

Proposed Changes Considered

Under the proposed Banking Act of 1935 it is possible that a substantial portion of the twenty billions of dollars of real estate mortgages now held by savings, building and loan associations, insurance companies, and savings banks might be transferred to the commercial banking structure. It is questionable whether the savings, building and loan associations, savings banks, or insurance companies can function or expand in face of competition for prime mortgage investments from commercial banking institutions whose cost of capital, because of its demand or short-term nature, is today 2% or less.

Still another factor which demands that caution be exercised in extending the use of bank deposits for long-term financing is the insurance of bank deposits. Through the Federal Deposit Insurance Corporation the Government of the United States has assumed a moral obligation to the bank depositors of this country. The Congress and the Government must either make certain that safe and sound management policies are followed in the insured banks, or face the alternative of paying off the depositors in cash. It is frightening to speculate on the amount of money and the burden on public credit which would be caused by a future real estate deflation of only one-half the intensity of the recent one, if the banking structure should acquire the bulk of the long-term mortgages.[6] In the next credit or real estate deflation period, we would find our banking system substantially weakened by long-term, non-liquid real estate investments, and we would ultimately have to rebuild a sound and separate mortgage credit system, either through encouraging private or cooperative enterprise, or through direct government intervention.

No real solution is afforded by merely transferring long-term frozen assets from a primary lending institution to another institution, even though it be a reserve institution, especially in times of nation-wide credit stringency. Real estate loans by their very nature do not have, and will not have, an organized market or market liquidity.

At the time of the consideration of the National Housing Act I ventured the opinion that neither legislation nor insurance arrangements could make long-term mortgages so attractive or so liquid that they could find a cash market at practically face value in times of money stringency. I still think this observation is sound, and yet to be disproved. I believe we can so reconstruct our financial arrangements that the government, either directly or through the Federal Reserve System, need not assume this responsibility.

The proposed banking act, of course, aims at remedying this non-liquidity of mortgage credit by making it eligible for loans from Federal Reserve banks. But a question arises whether it does actually accomplish this purpose. It is

(*Footnote 5 continued from page 220*)

"It is interesting to imagine the value that would have been assigned, during the recent years of depression, to a currency issued by a Federal mortgage bank against the rediscount of so-called 'guaranteed' real estate mortgages. The proposed bill would permit precisely such action in the event that similar circumstances should arise during another depression."

[6] "It is, however, difficult for us to reconcile the insurance of deposits with the feature of the bill that permits national banks to make long-term real estate loans up to 60 per cent. of the amount of their time deposits or 100 per cent. of their capital funds, whichever is larger, in the face of the fact that excessive real estate loans have been one of the primary causes of bank failures." (*Ibid.*, p. 1.)

not adequate merely to provide loan facilities on such long-term assets in order to meet withdrawal demands of depositors. Giving rediscount privileges to paper which is not fundamentally liquid by wide eligibility provisions at Reserve banks does not change the inherently non-liquid nature of real estate paper. This method merely passes this non-liquid mortgage paper on to the Reserve banks themselves. The resulting freezing of the assets of the Federal Reserve banks would prevent them from fulfilling their original function as the final sources of liquidity for the banking structure.

Furthermore, the proposed liquidity which is in violation of the principles defended here and observed by the successful central banks of other countries is not a definite promise to the banker but is subject to the discretion of the Federal Reserve Board. The proposed act reads: ". . . upon the endorsement of any member bank . . . any Federal Reserve bank *may* discount any commercial, agricultural, or industrial paper and may make advances to any such member bank on its promissory notes secured by any sound assets of such member bank." (Italics mine.) Then in addition to this general discretionary nature of the loan or rediscount privilege, the Federal Reserve Board may change the conditions of such rediscounting or loan at will. The provision just quoted also contains the phrase: "and *subject to such regulations* as to maturities and other matters *as the Federal Reserve Board may prescribe.*" (Italics mine.) Therefore, it is not impossible under different conditions or with changing personnel in the Board that member banks may find themselves with assets on which they had hoped for accommodation but on which none was forthcoming, particularly if a widespread need should develop. In times of emergency other demands on the Federal Reserve System might give compelling reasons for the Federal Reserve Board to restrict such advances.

Present Facilities Are Adequate

One argument for further expansion of real estate lending by commercial banks is based on the surplus funds now held by such banks which should be permitted to find profitable investment. Granted the fact of such surpluses and granted the desirability of finding a profitable outlet for them, authorization for investing them in real estate paper is not necessarily the solution. Other questions in this connection concern the possibility of shrinking commercial bank assets if they are too large; the use to which commercial bank funds have been put in the past; and the volume and availability of other sources of credit for real estate lending, together with the effect of the proposed changes in the banking structure on these other agencies.

Consider first the present volume of funds in commercial banks and their possible use. A question immediately arises as to whether a considerable portion of these funds may not be taken up by increased business activity which will call for increased use of business credit. It is a recognized phenomenon of the business cycle that, following the crisis-depression stage, idle funds accumulate until low interest or complete lack of earnings tempt them into the field of long-term or capital investment. Historically, a large portion of these funds have been needed in the ordinary financing of business when recovery really commences. It would seem to be short-sighted public policy to press bank funds into real estate credits under such conditions.

Then there is the matter of the possible expansion of intermediate credit for business, which has already been mentioned. If authorization for such lending were given to commercial banks, it might conceivably absorb a considerable amount of present idle funds.

In any event, it appears that the United States is overbanked, both in number of banks and in dollars of deposits. Such a situation is suggested by a comparison of American conditions with those in other countries.[7] But this fact does not constitute a valid argument for further expansion of the banking structure. Overexpansion in the past has led to pyramiding of credit, credit booms, and subsequent crashes. A sounder policy would seem to be to shrink bank assets to some extent, if they are too large, rather than to encourage further expansion.

Furthermore, examination of past practices of commercial banks shows that they have never made any substantial volume of construction loans other than short-term advances to construction companies and reliable builders. Accordingly, it is not reasonable to expect that, given broader real estate lending powers, banks will reverse their past policies and stimulate a substantial volume of building by going into the construction lending field for the first time. What seems more probable is that with their low-cost demand or semi-demand funds they may take over seasoned mortgages now held by mortgage lending institutions. The net result might be no increase either in construction or employment.

Building activity has not been deterred for lack of reasonable, safe credit. The price of present properties in relation to costs of construction, vacancies, unemployment, and general unwillingness to incur debts on the part of prudent citizens and conservative businesses explain the lack of volume of construction at the present time. Of course, there are speculative builders and others who would build office building upon office building, hotel upon hotel, and apartment upon apartment if the now regretted 100% mortgage credit of 1927-29 were available. Certainly, this is not the type of credit which banks or any other type of financial institution should be encouraged to extend even in the interests of more construction.

Still another of the pressing arguments for liberalizing the power of commercial banks to make real estate loans falls when one looks at present regulations and finds that, if they would, without any change in existing law, these banks could make approximately three billion dollars more of such loans than they have at present.[8] These loans are not limited to five years but include any long-term loans insured under Title II of the National Housing Act. This indicates that prudent bank manage-

[7] Calculations based on data in the *Federal Reserve Bulletin* and *Reports* of the Comptroller of the Currency show per-capita assets in commercial banks as of June 30, 1933 approximately as follows (expressed in U. S. dollars at the average rate of exchange, June, 1933): United States, $365.04; Great Britain, $225.94; France, $58.49; Germany, $49.88; and Canada, $261.95.

[8] An approximation of the amount of funds available for real estate loans may be made by an analysis of the time deposits of commercial banks. According to the *Federal Reserve Bulletin* of March, 1935, p. 188, the time deposits of licensed member banks as of December 31, 1934, aggregated nearly 10 billion dollars. This would permit total real estate loans of nearly five billion dollars, whereas the present loans of this type are about two billion two hundred million dollars, making for a possible expansion of nearly three billion dollars more in loans on improved properties, under the present Federal Reserve Act. Or an even larger sum might be available for real estate loans, since they may be made up to 25% of capital and surplus, if these items total more than time (and savings) deposits.

It might be noted further that, although since the middle of 1933 the trend of time deposits has been upward, the loans secured by real estate (see p. 153, March, 1935, *Federal Reserve Bulletin*) have steadily declined.

ments are not making any volume of real estate loans, and present authorizations are ample for them to more than double their volume if they consider it sound banking policy.

Widening the powers of commercial banks to make real estate loans would not alter the necessity for the Home Owners' Loan Corporation and the Farm Credit Administration. While necessary and useful at one time, the present principal pressure for Government loans in the farm and home field is a result of the unusually favorable terms offered by Government agencies rather than a clear-cut shortage of mortgage credit for sound risks. Certainly, neither banks nor any other lending institutions should be expected to substitute for the mortgage relief activities of the HOLC and the FCA where unusual risks were taken for reasons of broad public policy.

Finally, the savings institutions of the country are able to meet current, sound mortgage demands. Today two-thirds of the building and loan associations in the United States are actively making mortgage loans. Cash on hand, improved mortgage collections, increased savings, and the resources of state and federal reserve arrangements put them in a position to lend a billion dollars in the coming 12 months. These institutions loaned over half a billion dollars in 1934. In addition to the associations, insurance companies have re-entered the mortgage market and savings bank participation is increasing in the sections of the country which they serve. The problem of these institutions is to obtain sound mortgage risks. The difficulty of obtaining good loans is attested by active advertising for loans except in a few areas, lowering interest rates, and smaller instalment payments which are direct evidences of a developing competitive drive for prime mortgage business. Another six months will see a doubling of this activity.

Also to be considered is the effect of the proposed changes in the banking structure on these thrift and savings institutions. It would seem unwise to embark upon any program which would discourage the sound and effective functioning of these organizations. Much public and private good may be derived from providing savings institutions in which the middle classes, and the persons in the humbler walks of life may be encouraged and rewarded in the form of 4% rates on their systematic or accumulated savings. Such institutions have rendered great public service in the past and have supplied a major portion of the real estate credit for homes and residential properties; their work should be strongly supported and encouraged. The proposed legislation will have an adverse effect on the long-term development of savings institutions and conflict with the Federal Home Loan Bank Board program sponsored by the Government. From the point of view of government, the jurisdiction and leadership of the Federal Reserve Board should not be expanded into the field of mortgage credits, which is the important and prime responsibility of the Federal Home Loan Bank Board.

Summary

The whole trend in mortgage practice is toward long-term obligations ranging from 12 to 20 years. This is sound, as it provides for repayment of the entire indebtedness in an orderly way and within the income or capacity of the average citizen. These mortgages and all other mortgages, regardless of their legal terms or conditions, are essentially long-term frozen paper which can only be liquidated slowly and over an ex-

tended period of time. It does not seem that discount arrangements or other devices can be developed which will safely permit the investment of anything but long-term funds in such securities. The distinction between long- and short-term credits is essentially practical and real. Alteration of the Federal Reserve System in order better to handle stress or emergency situations should not lead us to broad alterations which would encourage unwise banking.

It should be recalled that when the FDIC insures deposits it is not only insuring ultimate solvency but is also guaranteeing to a numerous group of creditors that it will pay them on extremely short notice in case of a bank closing because of inability to meet demand deposits or general withdrawals as the result of a frozen condition.

Past experience indicates that publicly known borrowing under such circumstances does not solve the situation in stress periods. The real solution is a contract or arrangement with those supplying the capital that they cannot withdraw all their funds except through orderly liquidation of the long-term securities in which they are invested. This is the essence of the savings, building and loan association and cooperative bank plan of operation. If there is a lesson to be learned by English experience, which is so often referred to by public leaders today, it is one of no mortgages in the commercial banking structure and broad encouragement of the so-called building society movement. The active construction and favorable interest rates on mortgages which prevail in England at the present time are attributable to a strong and virile development of savings, building and loan associations. It would seem wise to follow or pattern after that experience rather than encourage or risk a repetition of our own recent experience in the banking and mortgage credit field.

The whole subject needs a great deal of further study. This article is advanced in no sense as the final word on this matter but rather as a general statement, at a time when the question is under public discussion and involved in federal legislation and when there seems to be a paucity of literature concerning the relation of our recent bank difficulties to banking policies in general and to real estate mortgage credit in particular.

Is the Power Holding Company Necessary?

By WALTER M. W. SPLAWN*

ECONOMICS is the study of the approved ways of getting a living, and the social consequences thereof. The ways of getting a living may be classified as productive, non-productive, and neutral. The non-productive activities, such as swindling and the exercise of monopoly power, are generally disapproved by organized society. The neutral means of obtaining a livelihood, such as marrying wealth or inheriting wealth, have either the expressed or tacit approval of society as formally organized through government. In contrast with the frown of government upon non-productive activities and the tolerance of those which are neutral are the approval and encouragement of such productive endeavors as farming, mining, manufacturing, transportation, and banking.

Into which category do the activities of the power holding company fall? As it developed and as it is used, is the holding company non-productive of wealth, or is it an instrumentality of aid in creating wealth?

Those who defend the power holding company assume that it is necessary to the economical generation and distribution of electrical energy. They then treat the non-productive activities of holding companies as though they were exceptional and speak of them as mere abuses. One of the purposes of government is to eradicate abuses. The advocates of the holding company loudly proclaim their support of government devoted to the correction of abuses.

Is the assumption well founded that the holding company is necessary to the power industry? Are the activities of the power holding company which are spoken of by holding company executives as abuses really exceptional? Are the activities which have brought the power holding company into disfavor to be classified as abuses or as uses—that is to say, are the objectionable activities of power holding companies exceptional or universal? If the ordinary uses to which the holding company is put are non-productive, it is incorrect to speak of those uses as abuses, as though they were exceptional. If the uses of the holding company are non-productive, there is no economic justification for its existence. If the general uses of the holding company are productive of wealth and if such uses are necessary to the economical supply of electrical energy, regulation might protect the public against the exceptional activities which may be labeled as abuses. The first inquiry must be, what are the uses to which the power holding company is put?

Uses of the Holding Company

I have found two common uses of the holding company. In my opinion, these two uses account for the power holding company as it is today. These are: (1) the acquisition of control of operating power companies; (2) through such control to divert revenues from the operating companies to those in charge of the holding companies.

The holding company is a corporation which acquires stocks and bonds of other corporations with the intention of controlling some operations of physical property. During the past 40 years there has been increasing laxity in granting powers to corporations. A

*Member, Interstate Commerce Commission.

corporation is a creature of a state. It is an artificial person. It is supposed to be a convenience to serve natural persons. After corporations were given power to own stocks and bonds of other companies, legislatures went to amazing and dangerous lengths in authorizing charters which rendered the management of a corporation practically irresponsible and which had the effect of placing the security owners at the mercy of the management. Management has been given the opportunity and power to act arbitrarily. As a result of competition in laxity, it became possible to use a corporation as a holding company for acquiring control of large aggregations of wealth with only a nominal outlay and without assuming the risks which, under our system of private property, justify profits.

A holding company could acquire an operating power company by exchanging its own securities, or the securities of its subsidiary for the voting stock of the local company. This voting stock in the hands of the local or operating company might have any particular value. A holding company could organize a subsidiary or an intermediate holding company and have it offer its stock for the voting stock of the local going concern. It could offer share for share, or, ten shares for one, or, whatever might be necessary to tempt the stockholders of the going concern to give up their shares for the stock of an intermediate holding company. In this way the holding company could acquire control of the operating company without any outlay of cash. If the owners of the local company could not be induced to exchange their stock for the shares of a corporation, the holding company could then offer them cash. It could obtain the cash from the public. A typical example would be for a holding company to arrange for a purchase price at a figure acceptable to the owners of a local company. The holding company would then organize a subsidiary or intermediate holding company and offer its preferred stock, or, perhaps its debentures, or short-time notes, to the investing public. The properties behind the securities offered to the public would be the voting shares of the operating companies. If the owners of the shares had insisted upon more than their worth in cash, the holding company would have its engineers re-appraise the assets of the operating company in order to bring their book value up to the desired figure. In this way the investing public would be led to believe that the preferred stock and bonds of a subsidiary holding company were supported by the control of operating properties with physical assets in excess of the capitalization of the intermediate holding company.

Through the device of pyramiding, those in control of the company at the apex of the pyramid, without any financial risk to themselves, become absolute masters of all operating companies. These operating companies could be acquired through such processes as have just been described. Pyramiding has been greatly facilitated by the authority so easily attainable in some states to issue some classes of stock which would have no right to vote. The practice of disfranchising the stockholder through the provisions of corporation charters, or of rendering their votes ineffectual through widely scattering voting stock and preserving to friendly interests just enough shares to assure control has made it easy for holding companies to gather in operating properties.

After the holding companies have acquired power operating companies as

just described, they then exercise their second function to make money for the insiders out of the properties controlled. This is sometimes done by reselling the operating properties to the investing public through other holding companies. Another universal means of exploiting operating companies is through the so-called service contracts which are imposed upon operating companies by reason of their being under control of a holding company which also controls the service company.

Present Types of Holding Companies

Before taking up the defenses of the power holding company, there should be an account of the types of such holding companies as now exist. The holding-company groups show a great variety with reference to the locations of companies into which they have bought. Some groups are confined to a single city, and others to a single state. Some have holdings in a majority of the states of the United States. Some groups have subsidiaries in foreign countries.

There is almost every variety in the intensity of occupation of a given area by a group. The activities of some groups are highly concentrated in their principal regions and in other cases interests are spread thinly over vast areas. Certain groups may operate intensively in one area but not in another. Apparently there is no large region in which a given group serves all the population with all three principal services—electricity, gas, and water. Various groups are intertwined in the areas, apportioning the political divisions among themselves. Four types of holding-company groups may be distinguished. The first group comprises those whose properties are concentrated in a single city or metropolitan center and which have exclusive rights in that area. Often the operations are defined by franchises granted many years ago by municipal jurisdictions, the political boundary lines of which are now obscured by population growth and spread. In the Boston Metropolitan Area, for example, seven distinct organizations are engaged in the retail distribution of electricity. In addition, five municipalities have public ownership and operation of the service. Of 32 important utility aggregations dominated by holding companies, eight are confined to large cities. These eight companies are limited to metropolitan areas and the immediately contiguous suburbs.

A second distinct type of geographical extension is represented by those systems the properties of which are situated in larger but definitely limited areas. They do not extend their operations beyond their particular areas, they occupy them almost exclusively, and the operations are capable of interconnection.

A third class occupies some important area or areas intensively and almost exclusively, but they extend into other areas in which they have very thin veneers of operations. Often their geographical situations suggest the ambitions of the management to expand, or a rivalry between two groups.

A fourth class is characterized by a wide scattering of properties. This case may be subdivided into two subordinate classes. One serves a number of isolated areas in a manner which suggests no comprehensive plan of consolidation. But some of the areas are themselves of considerable extent, both from an absolute standpoint and in comparison with those of neighboring interests, and in a number of cases are occupied almost exclusively. The second subordinate class of the fourth division

represents an extreme scatteration. In few places are the operating properties close enough together for physical contact and as a rule they are surrounded by properties of other groups.

It is seen that the geographical distribution of the operating properties controlled by a power holding company is fortuitous and opportunistic, and subject to no logical determination. A holding company limited to the operating companies of one metropolitan area may control as much wealth as another with interests in 20 states.

Alleged Advantages of Holding Companies

Let us turn now to the defenses of the power holding company. The arguments usually made in justifying the power holding company may be summed up as follows: (1) holding companies are useful to tide over a period of time between the acquisitions of control of operating properties by another company and complete consolidation; (2) holding companies are useful to combine properties in different states when state laws require separate incorporation; (3) it is argued that holding companies accomplish a diversification of risk for holders of their securities since the assets of the holding companies contain stock in many different operating companies, perhaps widely scattered; (4) holding companies perform various services for the operating companies in their systems which result in improved service and lower costs. Some of the services specifically enumerated are as follows: (a) furnishing centralized management; (b) financial services enabling operating companies to obtain capital on more favorable terms; (c) expert tax service; (d) accounting advice and service; (e) statistical analyses; (f) expert and large-scale purchasing; (g) advertising service and aid in further development of business; (h) insurance service; (i) expert engineering service; (j) service of rate experts; and (k) expert personnel advice.

Where the properties held by the holding company are contiguous and capable of physical interconnection and where such properties happen to be divided by state lines, no good reason appears for not using a holding company as a convenient device for binding into one corporate activity a physical operation which happens to straddle a state line and which can better serve a locality when operated as a unit. The vice of this defense is a lack of clarity. There is no objection, which could not be overcome, to using the holding company to combine local companies separated by state lines, in order that physical properties of such local companies may be physically interconnected and be operated as a unit in the limited area in which it is economical to distribute electricity from a common generating plant and where the existence of a state line makes it necessary to have two or more operating corporations to perform what is in effect a single unified operation. The first two reasons do not account for the power holding company as it exists. Neither of these uses is productive; the most that can be said is that they are neutral. They are not objectional uses of a corporation though they do not result in the creation of any wealth, and they are not necessary to the production of any utility. Through compacts between states or through the amendment of corporation laws, the same ends could be accomplished by local operating companies, although not so conveniently.

A third defense which is strongly urged is that a holding company contributes to the diversification of risk. This is an appealing lure to the investor.

An analysis of the holdings of any one of the leading power holding companies discloses a failure to achieve the geographical diversification of risk claimed as a protection to the investor. Several groups have holdings in different parts of the country. These holdings as a rule are not balanced against one another either in the amount of investment, or in revenues. A group will contain a very large unit serving a large population in one state and will be accompanied by some insignificant holding in another state. Moreover, the holding company itself is the least stable type of corporation to which the investors can turn. This is because the holding company specializes in purchasing the securities of other companies which carry the voting control. Under our corporation laws as a rule the votes are held by the stocks representing the thinnest equities. Instead of making the claim that the holding company achieves diversification of risk which is of benefit to investors, it should be admitted that, so far as risk-bearing is concerned, the holding company is a device by which risk is readily shifted to the groups of investors who believe they have contracted themselves out of a part of the risk.

Those who buy the bonds of operating companies are lulled into a feeling of security in the belief that a lien on the physical properties of an operating company is a protection to the bondholders. The holding company can impose improvident contracts upon the operating company which will exhaust the income of the operating company and leave nothing for interest on the bonds. In case of a receivership of an operating company, the holding company can usually maneuver one of its employees into a position where it will appear to be necessarv and fair to appoint him as a receiver. On account of financial difficulties in which the operating company finds itself by reason of holding-company design, indifference, or poor management, the bondholders may be required to make sacrifices.

Again, those who buy the preferred stock of holding companies are led to believe that they will get the first call on the income of their company. Yet the holding company management is free to issue, and in many instances such managements have issued, debentures, or short-time notes, without regard to preferred stockholders. Through the device of getting control and through pyramiding, those in control are not required to make any substantial investments. Profits are a reward for risk-taking. Under the holding-company set-up profits are taken without incurring risk, and risks are borne by the overconfiding public.

The fourth line of argument offered in support of the holding company is that holding companies can supply services such as mentioned above to the operating companies of better quality and at lower cost than the local companies themselves could otherwise obtain. The holding companies, through service arrangements, do supply every manner of managerial and supervisory service. In the propaganda disseminated by holding companies various claims with reference to these service organizations are made: that they are more expert; that the local plants could not otherwise get them; that the service rendered by local plants to users of electricity has been greatly improved in quality and dependability; it has cost less to finance renewals of loans and extensions of local plants; and rates to consumers are lower because these economies of centralized management are passed on in the form of reduced rates.

These and similar assertions are made over and over again without furnishing evidence. When proof is offered, it is usually in the form of a single instance or of some isolated operation.

It appears that absolute and centralized management costs the consumers more than decentralized and local management. The Federal Power Commission has found that the rates charged by companies within a holding company system are higher than rates in similar companies similarly situated, but under decentralized and independent management. The evidence is that the holding companies charge as much or even more for the services they supply than it would cost the operating companies to obtain them under competitive conditions. The improvements in the arts which have resulted in increased efficiency and lower cost of operation are not traceable to holding companies.

Are Uses of the Holding Company Unproductive?

The power business is conducted under monopolistic conditions. The operating companies have franchises from the municipalities they serve which confer the privileges. Municipalities and states undertake to regulate the issuance of securities, to supervise the quality of service, and to fix rates to consumers. State and local governments were fairly successful in these matters until the local companies passed to the control of holding companies. Holding-company control has to a large degree rendered state and local governments impotent to regulate their creatures—the operating electric companies.

While a few important holding companies have charters which may be traced back a good many years, and perhaps may be traced to the laxity of some legislature notorious for its banality, most of them have obtained charters since 1920. The electric business was largely developed before these holding companies came into being. The period of greater risk and greatest difficulty in financing had passed. The mushroom growth of the power holding company has coincided with the era of speculation and stock-market jobbing from 1923-1929. The holding company has not created the electric industry. It has invaded and mastered that industry.

By and large the power holding company cannot be said to be productive. The best that can be claimed for it is that it is neutral so far as obtaining control of wealth is concerned. It is a corporate speculator, clever in acquiring control of properties brought into being through the creative genius and economic endeavors of others. One has but to become familiar with the way the holding company acquires properties and exploits them to become convinced that they are non-productive and destructive of wealth. They have brought disappointment if not ruin to millions of small investors. They have been successfully employed in keeping rates up far beyond the time for their reduction. When honestly and ably managed, they have not demonstrated that absentee and centralized control and operation of local companies are less expensive than independent and decentralized control and operation. Even when honestly and ably managed, they have brought heart-breaking disappointment to their stockholders and have retarded a reduction of rates to the consumers. The stocks of the best managed holding companies have been a drug on the market, along with the stocks of those notorious for bad management. The irresponsibility and secrecy possible have let into these companies individuals who have caused embarrassment to every

honest management. The public has been confused and does not distinguish between the holding company which itself owns no physical property and the public utility corporation which generates and distributes electric current. The holding company has resulted in an illogical attempt to organize on a national scale a business which by its very character is local. This attempt has called into being intermediate holding companies and all sorts of subsidiary holding companies in bewildering relations to each other, borrowing money from one another, and borrowing from and lending to the operating companies. The one outstanding result, as far as investors are concerned, of these confused intercorporate contrivances is that the supply of sound utility securities is being destroyed. Investors desiring utility securities are sold the stocks and bonds of holding corporations instead. Those corporations are several times removed from the physical properties.

The general uses to which the power holding company is put are the very uses which the public has come to recognize under the name of abuse. They are not exceptional and non-essential departures from use which constitute abuse. They are the customary and the ordinary practices. The uses of the power holding companies are in the main unproductive and at best neutral so far as creating wealth is concerned. Regulation which would eliminate the so-called abuses, if effective, would destroy the companies for the reason that the so-called abuses are the customary uses to which the companies are put.

Conclusion

Is the power holding company productive? If what are claimed as advantages of the holding company were, in actual practice, the general uses to which the holding company is put, the answer would be that holding companies are neutral if not productive. If the so-called abuses instead of being exceptional are really the uses of the holding company, the answer would be that holding companies are unproductive.

Some important economies in supplying electricity are effected through physical interconnections between a central generating plant and local facilities for distributing electricity in communities to which power can be economically transmitted from the central power plant. Such an integration may extend over a radius of 50 or even 100 miles. One operating company could own all the property necessary to such an arrangement. This sort of an operating company could exclusively occupy its territory. The regulation of such companies could be by local and state authorities. The securities of the operating companies would be particularly attractive to investors for the reason that they would represent interest in operating companies owning both the franchises, granted by governments in the territory served, and physical properties committed to the enterprise. The tendency would be for the stock of the company to be owned by its patrons. The ownership, control, and regulation of such an operating company would be largely exercised by the people in the territory occupied by the company. Operating companies of this type would be able to sell their bonds, when necessary to issue bonds, to yield a relatively low rate of interest.

Where the existence of state boundary lines would make it difficult for one operating company to function within a given area, a single holding company uncontrolled by any other corporation would be a convenient device through which to meet this difficulty.

At present there are a number of subsidiary or intermediate holding corporations each of which occupies exclusively, or almost so, a territory in which an integration of central generating plant, transmission lines, and local facilities for supplying consumers has been achieved. If such subsidiary and intermediate companies through equitable interchange of securities could become independent, many of them could readily become operating companies with all the advantages of independence, of monopoly within the territory served, and of regulation by the local government. The rivalries of top holding companies in the acquisition of properties have frequently resulted in a diversity of control and ownership within a territory which could be exclusively occupied by one operating company.

If it could be shown that a power holding company is put to productive uses which outweigh its unproductive uses, the necessity for the holding company would have to be established. The generation and supply of electrical energy are local.

The organization on a national scale of enterprise local in its operation is not necessary. The user of a telephone station wants possible connection with every other station. Physical interconnection between telephones is necessarily nation-wide. The organization of that business on a national scale has appeared therefore logical. The physical characteristics of electric power business require it to be operated as a local enterprise. There is no necessity of a common ownership of two or more local concerns.

The Future of the Holding Company

By WENDELL L. WILLKIE*

TO discuss the future of the holding company, there must be a definition of the term itself in order to preserve clarity of thought. In speaking of the holding company regardless of the business field in which it functions, I have in mind a corporation having direct ownership of all or nearly all the common stock of an operating company or subsidiary and the exercise of the ordinary rights of ownership. This is the simple type of holding company but, since its extinction is advocated by some of our legislators and other critics, comments on its economic and social usefulness or lack of them are in order.

The Uses of Holding Companies

The basic *legal* reason for the existence of holding companies in the utility and other fields of American business is the lack of uniform state laws concerning corporations. The basic *economic* reason is the desire of men and women, acting collectively through the instrument of a corporation, to develop as well as to diversify their investment of capital, both as to geographical location and variation of industrial or commercial activities. The foregoing reasons account, therefore, for the fact that 80% of the corporations whose securities are listed on the New York Stock Exchange, for example, are holding companies or combination holding and operating companies.

The Federal Government also makes use of the holding company type or form in carrying on many of its activities and has not hesitated to take advantage of the laws of Delaware where so many non-governmental business ventures are incorporated—as, for instance, the Electric Home and Farm Authority controlled by TVA by interlocking directorships. Such incorporation of two different lines of business activities makes for segregation of accounts, limitation of legal liability and, in general, good organization. Numerous other examples of the separate incorporation of Federal business activities could be cited but the practice and the advantages of it are too commonplace to warrant detailed discussion.

Holding companies are largely responsible for the raising of capital funds and, what is equally important, the creation of skilled managerial groups which have made the use of electric service commonplace in more than 22,000,000 American homes. Even our critics admit that electrical development in this country would not occupy the advanced position it does today had it not been for group operation of electric properties by holding companies. It also is admitted that, because of the newness of the business and the strong trade position occupied by competitive forms of light and fuel, investors by themselves would not have supplied all the capital required and that a large portion of it would have had to come from that portion of the public which was willing to assume the hazards of the business and speculate on its future. The social importance and value of these undramatic features have been lost sight of in the political clamor that has been raised recently against all holding companies but the principles still hold true and are needed for further

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extensions of electric service, the future use of which is far from any discernible limit.

It is likely, however, that further development can be accomplished best by further integration. A political approach to this objective has been made in the Wheeler-Rayburn Bill which proposed, among other things, that a holding company may own and direct only one integrated system. Comparatively few holding companies can meet this requirement because of the geographical diversification factor which investors have required and to comply now with the provisions of the act would result in the forced break-up of large systems with attendant losses to many innocent security owners.

The non-political or business approach to a regional or integrated electric system would be for the various holding companies to work out sales and exchanges of property units over a specified period of say not more than 10 years, during which time, if property integration is to be a Federal power policy, Federal income, stamp, and other government taxes on the sale or exchange of property would not be applied. Negotiations carried on by experienced utility managements would be far more successful than "shotgun alliances" engineered by a remotely located Federal Government bureau subject more or less to shifting political influences, regardless of sincerity of purpose of the administrators, because delegation of political power and authority upon men does not likewise confer business wisdom and executive skill.

For the first time in several years low interest rates resulting from the immense accumulation of idle capital have brought about a remarkable price improvement in bonds of sound business enterprises and enabled them to finance or refund their senior security obligations at lower interest rates. Various operating utility companies, with the exception of those located in areas threatened by Federal power competition, have taken advantage of the improvement in market conditions and have recently sold mortgage bonds on a 3¾ to 4% basis. It is obvious that, if the money market remains equally favorable for any length of time and mandatory dissolution of utility holding companies does not become law, vigorous steps can be taken by many utilities to work out recapitalization plans providing for the simplification of corporate structures and development of integrated operating company systems on a more satisfactory basis to all concerned than to have a legislative "death sentence" hanging over the holding company systems with the uncertainty that this would entail.

The Present Attack on the Holding Company Device

To speculate upon the future of holding companies is to hazard a guess, therefore, as to whether economics or politics will win out against the beneficial use to the public of this corporate instrument in American business. Fundamentally, the question is whether a person either natural or artificial may, in principle, own property and exercise the usual rights of ownership, in more than one of the 48 states or carried to a logical conclusion, should ownership of property be limited only to the citizen of the locality in which he maintains permanent residence? May a person own one farm or several farms in the state or even the county in which he lives and be barred by legislative fiat from ownership and direction of property that he might buy, inherit, or other-

wise receive because it is in another locality; in other words, is each state to be considered a separate foreign country in so far as ownership and use of property by its citizens are concerned, regardless of the economic and social usefulness which otherwise would be rendered the public residing in the other 47 states?

For reasons unknown to me, critics of public utility holding companies have failed to point out, in their public attacks, these simple facts about corporate business life. Can it be that these critics have deliberately kept the public in the dark in order to foster their crusades against the millions of thrifty security owners who have such a tremendous financial stake in one of the nation's largest and most progressive industries?

Holding companies in all lines of industry are now being threatened with extinction. Unless the business of the 48 states comprising the nation is to be confined to that of an intrastate character or unless uniform corporation laws are passed by all the states, what new device or legislation will be invented in order that business on a national or even a regional scale may be done without injury to the public through higher prices or inferior quality goods and services for what now makes up the American standard of living. At no time have I heard or read any sound argument that either cost of living will be reduced or standards will be improved by the breaking up of companies doing a large volume of business. This important omission is readily understandable to me, however, because once the public becomes cognizant of how these reforms, if enacted, will affect its welfare, short shrift will be made of the reformers and their experiments. I, therefore, rely upon public opinion as the great motivating force which will continue the existence of holding companies necessary under our present form of government and serving a useful purpose.

Proposed Constructive Legislation

Constructive regulation is not opposed but on the contrary is welcomed by the utility industry. I and others so stated before the House and Senate Interstate and Foreign Commerce Committees at hearings on the Wheeler-Rayburn Bill.

I was asked to submit specific recommendations and did so. I proposed that any existing gaps, practical or legal, between the power of the states to regulate and the present Federal regulatory laws should be filled by additional Federal regulation. The imposition of unnecessary and duplicating regulation and the needless destruction of property which would result from the passage of the bill, as introduced, cannot be justified.

In my memorandum I suggested that the following Federal legislation with respect to regulation of public utility holding companies should be adopted and would provide adequate and complete protection to both consumers and investors alike:

"(1) Require that, after such time as is required for necessary corporate adjustments, all shares of stock shall have one vote.

"(2) Prohibit the issue of securities, for which state commission approval is not required, which the Securities and Exchange Commission finds to be detrimental to the investing or consuming public.

"(3) Extend the Securities Exchange Act to all holding companies by requiring special registration where needed.

"(4) Require that a majority of the directors of holding and of operating companies and the principal officers of operating companies shall be actual residents of the territory served and that meetings of operating companies shall be held in their service territories.

"(5) Prohibit the officials of holding companies or of an operating subsidiary from owning more than 1% of the voting stock of any company furnishing services or materials to such operating subsidiary.

"(6) Require services to a substantially wholly-owned operating subsidiary to be rendered at cost; and to an operating subsidiary not so owned, at a reasonable profit.

"(7) Prohibit upstream loans, except with the approval of the Commission or of a state commission.

"(8) Prohibit the use of operating company employees in the sale of holding companies' securities.

"(9) Authorize the Commission, at the request of a state commission, to investigate the accounts and records of holding companies affecting service charges and other intercompany relationships.

"(10) Authorize the Commission to prescribe uniform systems of accounts for holding companies and subsidiaries, in the absence of state regulation.

"(11) Prohibit acquisitions of voting stocks of utility companies by holding companies without the approval of the Commission or of a state commission; and prohibit acquisitions by others of more than 5% of such stocks without similar approval.

"(12) Exempt from taxation corporate reorganizations for the simplification of corporate structures, when approved by the Commission, if effected on or before December 31, 1938.

"(13) Provide for interstate power boards, composed principally of the state commissioners concerned, to pass upon interstate wholesale power rates."

There is no inclination on the part of the public utility industry to oppose any legislation which is soundly conceived for a legitimate purpose. However, to the extent that any proposed legislation is unsound or unfair or will result in loss to the investing and consuming public and put undue burden upon the industry, it is the right and duty of the industry to oppose it. If legislation of a different character can be provided which will fully and effectively prevent the recurrence of the alleged abuses but with a minimum of loss to the companies and the public, there can be no valid reason for its rejection.

The question is what should be the nature and character of Federal legislation. An adequate answer to this question must be based upon a consideration, first, of the character of the industry and its operation; second, of the objectives of regulation; and, third, of the existing processes, machinery, and results of regulation. An adequate answer cannot be based upon a mere recital of particular instances of abuses and alleged abuses which have occurred in the past.

The function of the electric industry is to furnish an adequate and reliable supply of electricity at fair and reasonable rates without discrimination. The purpose of governmental regulation of public utilities is simply to see that these two public duties are performed. The problem of regulation is therefore the proper balancing of the two factors of management and regulation. Sound regulation consists of insuring the performance of the public duties by the utility companies at the lowest cost, both in direct cost of regulation and in sacrifice of initiative and capability in management.

The public obligations of an electric utility are imposed by the common law and statutory law of the states and are owed to the residents of the states. Their performance is primarily a matter for state regulation. Under our American constitutional system there is no Federal common law on this subject. No Federal statute on the subject should be enacted except in so far as it is shown to be needed to assist state regulation by filling specific gaps found to exist for either legal or practical reasons.

Almost all states now have and all states can have public service commissions with regulatory powers over

operating companies. In addition, the Securities Act and the Securities Exchange Act give the Securities and Exchange Commission power to require companies to supply investors all information which that Commission believes necessary for their protection.

The purpose of any new Federal regulation should not be to impose duplicating regulation or censorship, but to supplement the powers of existing regulatory bodies at those points, and only at those points, where such powers are inadequate for either legal or practical reasons.

As regards the adequacy of existing regulations from the standpoint of the consuming public, the purpose of regulation is completely achieved if he secures adequate service at reasonable rates. The only hiatus in the present power of state commissions over rates is in respect of interstate sales between non-affiliated companies. In this connection, provision may be made for "interstate power boards" of representatives of the state commissions concerned and of the Federal Power Commission to fix such wholesale rates when necessary, thus making use of any valuations or other data already compiled by the state commissions.

Criticism of holding companies on the ground of "absentee management" can be met in great part by requiring that a majority of the directors of both operating and holding companies, together with the principal officers of operating companies, shall be residents of the territory served, and by requiring that directors' meetings of operating companies be held in their own territories.

In dealing with relationships with affiliated companies, if the state commissions require more detailed information as to service contracts and charges of companies outside their states, the Securities and Exchange Commission may be empowered to obtain it for them. Provision can be made that, where substantially all operating companies' stock is held by a holding company, service rendered by the holding company shall be rendered at cost, and where there is a substantial minority interest a reasonable profit should be allowed. "Upstream loans" should be prohibited except with Commission approval, and a prohibition against the use of employees of operating companies in the sale of holding company securities should be included.

As regards the adequacy of existing regulation from the standpoint of the investing public, the investor is interested in securing adequate and accurate information, in being protected against discrimination in favor of any controlling group, and in seeing to it that his company is not stifled by excessive and unwise regulation. While the two Securities Acts already apply to substantially all large utility holding companies, they may be extended to include all holding companies. While sufficient authority to prescribe uniform accounting and to eliminate write-ups seems already to exist, amendments specifically giving these powers might be desirable.

If further regulation is desired concerning security issues, it can be accomplished under the Securities Act by prohibiting issues of securities of public utility companies except with state or federal commission approval, but both should not be required. The Securities Exchange Act might be amended to prohibit future acquisition of voting stock of utilities by holding companies without approval of state or federal commission, and to provide that after a time sufficient to permit necessary corporate adjustments, all classes of stock of utility companies should have

full voting rights, which would also operate against pyramiding.

As previously stated, proper corporate structures and the elimination of unnecessary companies are desired by the utilities themselves. However, the natural process of simplification is seriously retarded by the tax laws. If these were relaxed, in cases of reorganizations approved by a federal commission, simplification would be expedited. A time limitation for such exemption would provide a real incentive to prompt action.

Our state commissions are experienced and diligent in the protection of the consuming public in their states against excessive rates. The Securities and Exchange Commission has been but recently created and endowed with the necessary powers to remedy abuses, real or fancied, affecting the investing public. The effectiveness of both types of tribunals has increased through experience. The wise course is to utilize this experience, giving to existing commissions such additional powers as may be deemed appropriate for the purpose in mind. Complete protection both of the investing public and the consuming public can be obtained by strengthening existing Federal and state regulation, in the manner suggested, without the disruptive consequences which will result from the destruction of the public utility holding company.

Checking Erosion in the Upper Mississippi Valley

By MELVILLE H. COHEE and R. H. DAVIS*

SOIL erosion as an active menace to the agricultural industry of our nation has been recognized by conservationists for many years but only within the last decade has this evil been considered a major land problem. An erosion reconnaissance of the entire United States, completed during the latter part of 1934 by the Soil Conservation Service, discloses the true picture as to the extent of erosion. The survey reveals 51,465,000 acres of land essentially destroyed, by wind or water erosion, so far as further use for crop production is concerned. Most of this land had been cultivated and was once good soil. Its area is equivalent in size to the states of Indiana, West Virginia, Massachusetts, New Jersey, and Connecticut combined.

In addition to this devastated area, practically all the top soil has been stripped from an additional 105,594,000 acres. The fertility of this land has been materially reduced and often rendered entirely unsuited for further tillage.

Even though the virtual destruction of 157,059,000 acres is a tragic loss to our agriculture, the picture would not be so startling if this were all there is to it. Besides the severely eroded land, 513,074,000 acres have generally lost from ¼ to ¾ of the original top soil. This vast area, which is rapidly approaching destruction agriculturally, is nearly 27% of the total area of the United States, or 52% of all land in farms.

The question often arises as to why this wholesale wastage of land has been allowed by our landowners and operators. Why does the State of Wisconsin, for example, have 11,281,000 acres which have generally lost from ¼ to ¾ of the original top soil? Why have 3,675,000 acres in Wisconsin been allowed to erode to practically a submarginal economic condition? The answer, broadly stated, is that unwise use of our land resources under a regime of unregulated private property has caused this state of affairs.

Water running off or wind blowing over an unprotected soil gives rise to erosion. Run-off water (as distinguished from water which percolates into the ground) and ravaging winds in certain sections of the country are the two foremost factors bringing about erosion.

The average layman recognizes erosion only by gullies that mar the once smooth surface of our hillsides. To be sure, gully erosion is one of the major types of erosion, but that insidious form of erosion known as sheet erosion is of greater importance. Strictly speaking, sheet erosion leaves little or no visible evidence or marking of the surface. It is a general washing of the smooth surface of the top soil where the smallest veined pattern denoting the course of the run-off water is hardly discernible. This type of erosion generally removes only the finer and lighter parts of the surface which are the most valuable portions of the soil. Sheet erosion goes on wherever water runs over the surface of the soil. As the run-

*Extension Agent, In Charge, Education and Information, Soil Conservation Service; and Regional Director, Soil Conservation Service, respectively.

The reader is referred to a previous article by Mr. Cohee, "Erosion and Land Utilization in the Driftless Area of Wisconsin," 10 *Journal of Land & Public Utility Economics* 243 (August. 1934).

off water becomes concentrated in some part of the field or area, great cutting power results. First, small gullies appear. These may be likened to the tiny veinlets of a leaf in contrast with the smooth surface. This process is commonly called "fingering." Small gullies may be filled by the ordinary field operations and are not necessarily permanent, in contrast to the more advanced stage of gully erosion where large channels are permanently established.

Bank cutting along streams is another form of erosion and may be referred to as riparian erosion. Thousands of acres of fertile valley lands are ruined by changes in the course of stream channels.

Utilization of Land and Soil Losses

Specific and accurate information concerning soil and water losses, as well as various types of control measures, is available from studies carried out at the Upper Mississippi Valley Erosion Experiment Station located a few miles east of La Crosse, Wisconsin.[1]

It is evident from the data in Table I that the vegetative cover and the use to which land is put are the major factors determining the amount of erosion on sloping land. One rather spectacular fact found during collection of the above data was that each gallon of run-off water from fallow land, or land in clean tilled crops, carried away on the average approximately one pound of soil.

TABLE I. AVERAGE YEARLY SOIL LOSSES COVERING TWO-YEAR PERIOD, 1933-1934 (ALL PLOTS 72 FEET LONG WITH A GRADIANT OF 16%)

Crop or Condition	Soil Loss in Tons Per Acre
Corn, continuously	60
Corn in rotation, following clover-timothy	35
Barley in rotation, following corn	17
Clover-timothy hay in rotation, following barley	1
Bluegrass, sod, ungrazed	Trace

Selection of the Coon Creek Watershed Area

The Soil Conservation Service was established in September, 1933, under the office of the Secretary of the Interior, but later transferred to the Department of Agriculture. The objectives of the program devised and undertaken by the Soil Conservation Service, as stated by its Chief, Mr. Hugh H. Bennett, are:

1. To demonstrate that the impoverishment and destruction of our remaining areas of good agricultural land by continued erosion can be controlled;
2. To lay the foundation for a permanent national erosion-control program of adequate scope to meet the acute land crisis created by wasteful methods of land utilization.

Representative watersheds have been selected in the major geographic and agricultural regions where erosion problems are acute, on which areas the Soil Conservation Service is carrying out its demonstrations. At present some 40 such erosion-control projects are in operation, of which the Coon Creek watershed was the first to be selected in the United States. This demonstration area is located in central southwestern Wisconsin. Although the watershed lies largely within Vernon County, it also includes parts of the counties of La Crosse and Monroe (Figure I).

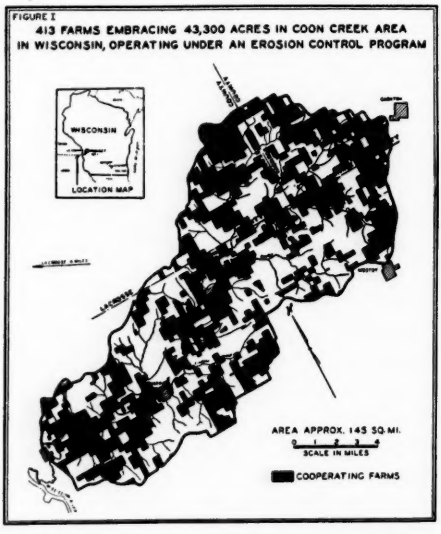
The Coon Creek watershed, that is, all the land draining into Coon Creek, embraces about 92,000 acres—almost 144 square miles. Approximately 800 farms and portions of farms are included

[1]Unpublished data secured from Mr. O. E. Hays, Superintendent of the Upper Mississippi Valley Erosion Experiment Station, United States Department of Agriculture.

in this drainage area. Some of the ridge farms around its rim have only a part of their land draining into Coon Creek.

The area extends in an easterly direction from the Mississippi River for 18 to 20 miles, and has a width varying between five and eight miles. The topography of the watershed is rough, typical of the Driftless Area. The Coon Creek watershed was selected as representative of this unique unglaciated area covering nearly 15,000 square miles, which is largely in southwestern Wisconsin but also extends into Minnesota, Iowa, and Illinois.

FIGURE I
413 FARMS EMBRACING 43,300 ACRES IN COON CREEK AREA IN WISCONSIN, OPERATING UNDER AN EROSION CONTROL PROGRAM



The highest point of the Coon Creek watershed (1,362 feet above sea level) is on its extreme eastern edge. The lowest point (641 feet) is at the mouth of the valley, where the elevation is only slightly higher than the Mississippi River. However, differences in elevation of nearly 500 feet occur even in the upper reaches of the area. Differences of 400 to 500 feet are sometimes abrupt, occurring within a distance of less than two miles. This gives some idea of the topography of the area. The average Iowa, Illinois, or even southeastern Wisconsin farmer would consider farming in an area with such rough land a rather hazardous undertaking. The topography of the area is also responsible for the field layout of the farms. The rectangular system of surveying has forced a gridiron of straight farm boundaries on an exceedingly rough terrain and the farmer has done his best to fit his land utilization to the topography. Figure II illustrates his difficulties in this respect.

The soils of the Coon Creek area are residual and loessial in origin, and their high productive capacity makes it one of the best farming sections of Wisconsin. Farms are found both on the ridges and in the valleys, their size ranging from 40 to 160 acres, with an average of 115 acres. The dairy enterprise is by far the most important in the farm organization, accounting for more than 60% of all gross income. Naturally, cropping and pasturing practices center around it.

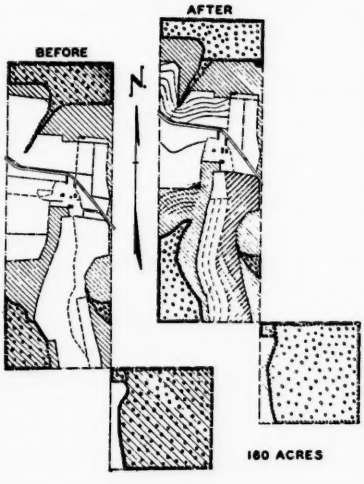
In spite of the erosion problems in this picturesque area, the economic stability of the region is surprising. The countryside has a prosperous appearance. The farm buildings for the most part are very substantial. At least 60% of the farms are free from mortgages. The value of the real landed property of the watershed is indicated by the assessed valuation for 1933. In that year the local assessor's valuation was $4,020,811, of which $3,093,999 was for the bare land and the remainder for the "improvements," i. e., buildings. The taxes contributed by the farms of the area in that year amounted to $62,824. Despite evidences of past prosperity and the general well-being now apparent in the valley, there are signs which point to a darker future. On nearly every

farm eroded fields are showing by their declining productive powers what future conditions will be if erosion is not checked.

Studies are under way to show what effect erosion has had on the economic welfare of the community. There seems to be some correlation between tax delinquency and erosion, and it is reasonable to expect that not only will the value of the land vanish as erosion takes its toll, but farmers will soon fail or be unable to pay whatever taxes are imposed on them. So far, tax delinquency has not been a serious problem. On June 1, 1933, the legal date when taxes are considered delinquent, 15.6% of all land in the Coon Creek area was delinquent, but a large proportion of these delinquent taxes were redeemed before January 1, 1934.

FIGURE II

EROSION CONTROL PROGRAM FOR A REPRESENTATIVE FARM



Coon Creek Watershed Area, U. S. Department of Agriculture, Soil Conservation Service, Project No. 1, La Crosse, Wisconsin

Development of the Erosion Control Demonstration Area

The Soil Conservation Service exemplifies the first broad attempt in the history of the country to put into operation large-scale, comprehensive, erosion-control projects. The methods used in such an undertaking include a combination of agronomic, engineering, and forestry practices applied jointly in a sound farm management and land-use program. For instance, in this program, wild-life resources are receiving adequate attention with little extra expenditure of time or money, and the conservation of wild-life species native to the region has been made part of the program carried out in the Coon Creek watershed. Inclusion of this phase of work exemplifies the breadth of this conservation program. Erosion control has been practiced to a small extent by many agencies in the past, but almost wholly from only one or another of several fields of approach.

Demonstration of erosion control by the combination of all approaches demands the services of specialists in each of the different fields. Therefore, agronomists, engineers, foresters, farm management men, soils men, and wild-life specialists are all included on the staff of the Soil Conservation Service in the Upper Mississippi Valley. In addition, the services of one hydrologist and sedimentation specialist from a co-operating bureau, the Geological Survey, are of considerable value in determining the water and soil losses from the area.

The successful establishment and completion of any such program on privately owned land obviously demands the

complete cooperation of the farm operator. General extension meetings were held in December, 1933 and in January, 1934 to tell the farmers about the program. They were informed that, if they wished to avail themselves of the services of the Government in controlling erosion on their farms, they must cooperate by doing certain things, for example: (1) refrain from grazing and burning all woodland areas with a gradient of more than 40%; (2) practice contour tillage on all cultivated parts of their farms; (3) operate along the contour of the terraced parts of their cultivated land areas, if they elected to have terraces; (4) cooperate in establishing strip-cropping practices on all parts of their cultivated areas not terraced, as well as on much of the terraced land; (5) contribute teams to move materials and supplies for such gully-control structures as might be constructed on their farms; (6) do work with teams in finishing some parts of the terrace ridges; (7) follow for a period of five years the practices mutually agreed upon between the Government and themselves, after both sides have worked out satisfactory plans together; (8) agree to put the commodities furnished by the Government, such as lime, seed, inoculation, fertilizer, and fencing at places designated on the farm map; (9) prevent overgrazing of their permanent pastures; and (10) cooperate in furtherance of a wild-life program on their farms.

In order to establish such a demonstration area and overcome skepticism and unwillingness to change from old practices to new, the Government made certain contributions quite justifiable under the circumstances, but all obligations of the Government for each farm were in accordance with a definite plan.

At the close of the extension meetings, the farmer made known whether he would like to have a Government representative visit his farm and actually inspect the land and discuss proposed erosion-control plans. If he agreed to cooperate, an "erosion specialist" (the official name of the men responsible for developing the farm plan) and an engineer, taking with them an aerial photograph of the man's farm, a hand level, and a detailed soils map previously prepared, visited the farmer. The Government representatives and the farmer then discussed the erosion-control plans as applied to the particular farm. These included possible location of a fence to protect the woodland from pasturing; where terraces may be built; how the fields would be arranged under contour tillage and strip-cropping practices; which are the steeper and more critical parts of the cultivated land that should be seeded to permanent pasture; which parts should be removed from cultivation and seeded to hay (preferably alfalfa in this area); where gully-control structures would be placed; what should be done to control his stream bank cutting; and what measures would further the wild-life program. At the same time a farm management survey was made by the erosion specialists for establishment of the best possible farm organization that will include the desired soil conservation practices.

At the conclusion of this visit a complete plan was formulated including a five-year cropping program. Using these plans as a base, the erosion specialist and engineer draw up a formal cooperative agreement which sets forth both the obligations of the farmer and the Government. These entire data are passed to the farm management specialist who checks them from the business organization and economic

standpoints. If necessary, the farm management specialist may visit the farmer with the erosion specialist who made the plans to discuss the farm organization phases of the program. The plans are in turn passed from the farm management specialist to the forester, who visits the farm if a woodland area or new plantings are involved. Sites for planting are carefully considered and woodland improvement practices are explained to the farmer. The chief engineer, in turn, checks the recommendation of his subordinate who assisted the erosion specialist. The entire data are finally passed to the agronomist who checks the proposed cropping and agronomic plans.

It may appear from the above discussion that many Government representatives visit each farm. However, it is seldom necessary that more than two or three such specialists visit a farm prior to beginning actual operations. On some farms the erosion problem is much greater than on others and time and thought are necessary to reorganize it for erosion control and yet maintain a satisfactory farm business. In all cases the objectives before the entire Soil Conservation Service staff are to permit a maximum farm income and at the same time keep soil and water losses at a minimum. When the plans are completed, the farmer becomes a cooperator of the Soil Conservation Service by signing the cooperative agreement, the details of which he himself has helped to outline.

Progress of Farmer Cooperation toward Control Erosion

At present more than ½ the farmers in the Coon Creek area are cooperators in the unified effort to control erosion on the watershed. Cooperating farms are evenly distributed throughout the entire 144 square miles of the watershed, representing a total area of 43,300 acres as shown on Figure I.

The plans made for all farmers to date call for treatment of 39,213 acres of this total farm area. Included in this area and needing treatment are 12,388 acres of woodland which have been retired from grazing and protected from fires. Some 65,000 rods of fence have been built to protect these woodlots. Improvement practices will be followed in an effort to make the woodlands as productive as possible, and at the same time they will aid in the prevention of erosion by reducing water run-off. Contour strip-cropping is being practiced on 13,019 acres and, of this area, 6,631 acres will be in permanent hay by 1936 and will only be broken in strips on the contour when reseeding is necessary.

When the terraces called for in the agreement are completed, they will protect 2,343 acres. Already 128 miles of terracing are completed and 1,710 acres of crop land protected by this method of control. To date, 872 dams have been built in carrying out the gully-control phases of the program. For the most part, these structures are small and represent types which the farmers can build for themselves once the methods have been demonstrated to them. Improved land-use practices which will lessen the amount of run-off water are being applied to the drainage areas of all protected gullies.

The present and future distribution of crop acreage on the 413 farms which are now "signed up" in the Coon Creek watershed is set forth in Table II. Especially noteworthy is the decrease in the area of land in corn and grain, two land uses extremely conducive to erosion, as Table I indicated. The area in alfalfa in 1936 will be four times that of 1934. All in all, there will be a

decline of 1,152 acres in crops under the new farm organization. This land will be placed in permanent pasture. Under the new arrangement 40.3% of these farms will be in crops, 27.4% in permanent pasture, and 28.6% in protected, ungrazed woodland. The other 3.7% consists of farmyards, lanes, roads, etc.

TABLE II. CROP LAND USE ON 413 FARMS, COON CREEK WATERSHED AREA IN 1934 AND AS PLANNED FOR 1936

Crop	1934		1936	
	Total Acres	Per Cent of Cultivated Area	Total Acres	Per Cent of Cultivated Area
Corn	3,454	18.6%	2,894	16.6%
Grain	6,701	36.0	2,955	16.9
Alfalfa	1,827	9.8	7,251	41.6
Clover and timothy	4,729	25.4	3,384	19.4
Emergency crops	629	3.4	92	.5
Rotation pasture	981	5.3	673	3.9
Tobacco and potatoes	269	1.5	189	1.1
	18,590	100.0%	17,438	100.0%

How the reorganization program affects an individual farm is illustrated by Figure II. Especially significant is the withdrawal of pasturage utilization of the woodlands. This is more than compensated by the increase of pasture on other parts of the farm as shown by increase of the shaded area. Under the new arrangement a part of the pasture is terraced. Permanent hay land takes the place of a considerable area of crop land and the remaining cultivated land in this part of the farm is organized into fields adapted to the contour of the land. Terraces appear on the cultivated crop land north of the road and a game bird food patch has been planted on the pasture land adjacent to the woodland on the northern part of the farm.

In southwestern Wisconsin the increase in pasture and hay land at the expense of crop land has been a benefit to the farm organization because the live stock industry is the predominant farm enterprise and dairying alone furnishes almost ⅔ of the entire gross income of farms.

It is indeed fortunate that southwestern Wisconsin has established the dairy industry so successfully. The dairy live stock industry is associated with good pasture and high quality legume hay crops, which are among the best possible soil protective covers. Much of the area in the Coon Creek watershed is suitable only for permanent pasture and hay crops because of the steepness of slope and erosive conditions of the soil. The dairy cattle industry is perhaps the best suited enterprise through which the farmer can market these crops. In some sections of the Driftless Area, the beef cattle industry is proving profitable and it also makes good use of pasture and hay.

The question naturally arises, what will the readjustment in farm organization do to the farmer's income? If it should drastically reduce it, what incentive will he have to cooperate in a soil-saving program? Since the first farm plan was completed only 17 months ago, it is difficult to answer the questions by the experiences of the Coon Valley project. So far, however, it seems safe to say that every farm included in the program has a more efficient farm organization now than it had prior to adoption of erosion-control practices. The very essence of good farm management is having a plan for the farm. With a plan, the farmer can organize his work more effectively. He can give thought to a better balance between his crops and live stock.

Another way of comparing the old and the new farm organization is in terms of feed values produced. A computation of the feeding value of the feed crops for 1934 as compared to 1936, based on average yield data for Vernon County, brings forth the surprising fact that there will be an increase of approximately 25% in total pounds of digestible nutrients and a 45% increase in pounds of protein content in the feeds. These increases in feeding values are based only on the feed crops; in addition, there is feed from the new permanent pasture on the 1,152 acres of retired crop land. Gains of this kind are offset in part by the expense of preparing the land for increased alfalfa acreages, etc. However, also to be considered are the permanent benefits from a reduction of soil losses.

The public in general and landowners in particular must come to the realization that, if our soil resources are to be conserved for future and even present generations, some extra labor and costs will be necessary. We cannot recklessly exploit a basic resource without eventually being faced with responsibility for the bill. With expansion of the erosion-control program under the general direction of the Federal Soil Conservation Service, including a great amount of work by the Civilian Conservation Corps, it becomes increasingly necessary that owners of affected land share a greater burden of the costs. It is hardly reasonable to expect the Government to bear all costs incurred in controlling erosion on private lands.

That the farmer is beginning to realize his share of the responsibility is indicated by his new attitude toward land. This is one of the most interesting and significant by-products of the work on the project. The farmer becomes more interested in his land. In the past, our soils have been so fertile that many farmers have been led to believe that plant food sufficient for all time existed in our soils, and no care need be given to maintenance of fertility. More recently, however, farmers have begun to realize that this is not true. To say nothing of the added work necessary to operate badly eroded and gullied fields, the crop yields are gradually being lowered wherever proper attention is not given to the land. In time, perhaps, every farmer will of necessity become a "true agriculturist," as in the meaning of the term in some European countries where each foot of soil is treated with care.

"Toward an Electrified America"

By EARL H. BARBER*

THAT the future of the electric industry is in jeopardy has become a matter of common knowledge; even investors know it. Or they should know it; for the spokesmen of the industry, in their opposition to certain manifestations of the New Deal, have listed symptoms enough to satisfy the needs of a patent medicine circular.

In our power stations, they tell us, generators stand idle, bereft of the industrial power load which formerly made American central stations the envy of the world. Yet in the face of these idle generators the Federal Government is adding more capacity, in sundry power developments of its own, to reduce still further the load on existing stations. As if this were not enough, a Federal authority is establishing municipal plants with rates so low that their "rubber yardsticks" will lead to general protest against the rates of electric companies, and to a general demand that what business remains to them be taken over by municipal plants.

A doleful prospect, shrouded in rumor and apprehension! But when the psychosis is examined in the light of experience, the scare is hard to maintain.

If municipal plants are so sure a way to low rates, why has their menace to the electric industry been so long in making its appearance? Municipal plants are nothing new; they have been with us for years—almost as long as the electric industry itself. During the boom years of the late twenties nearly 2,000 of them were in operation in the United States without disturbing the credit of the electric industry in the least.

Of course, it is possible that all electric companies will suddenly be converted into municipal plants, or beset with municipal competition, but is it probable? The change from private to public ownership has often been advocated, but seldom practiced. Municipal ownership has certain advantages, certain disadvantages, but it entails heavy responsibilities, and the public, with all its criticism of the existing order, has very generally stopped short of taking the fateful step. Municipal operation has been the exception rather than the rule. Is there any evidence, apart from a sporadic outbreak of agitation, that the public is about to cast aside its traditional caution now?

But even if there is no real evidence of a general movement toward municipal ownership, the Tennessee Valley Authority is setting rates for its municipal plants so low that electric companies will be obliged to meet them, in self preservation, and then their profit will be wiped out!

This reasoning finds many supporters, not only in the man in the street, but in the managements of electric companies, and sometimes in the managements of municipal plants as well. Yet some managements have very different views, and their ideas are backed by experience. It is several years since the president of the Hartford Electric Company announced: "We find much more profit in the all-electric homes earning rates as low as 1¾ cents than we do in the average home at 4½ cents, or in the small user at 8 cents."[1] The figures are somewhat antiquated now,

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[1] *Electrical World*, October 28, 1933.

but the declaration still remains evidence that the idea of greater total profit through a small unit profit on multiplied output has at last found lodgment in the electric industry.[2]

But at least there is idle generating capacity in our power stations? There is; and it warrants just about as much apprehension as a business man would feel at the temporary loss of one customer, if another one, larger and better, but hitherto unsolicited, was ready to step into the vacant place.

In view of the growing social importance of cheap electricity, and the dependence of the electric industry on credit and public confidence, it is high time to quit thinking in terms of scare headlines, and give some consideration to a few subjects which promise to play a dominant part in the future of the industry.[3]

Excess Capacity

Although the total power output of the United States sagged down from the peak of 1929, year after year, to begin a slow and cautious recovery in 1933, it may serve as an excellent indicator of the state of industry as a whole, but not necessarily of any particular industry, nor, paradoxical as it may seem, of the electric industry itself.

Most electric utilities lost a large part of their industrial power load during the depression, and the loss is responsible for the great decline in aggregate output. But some of them sustained no loss whatever, and it is their condition, rather than the average, which indicates what the future holds for the electric industry. The large power company which supplies the City of Washington, for instance, has not declined since 1929; it completed an addition to its old power station in 1931, and in 1933 a second station was completed to take care of the ever increasing load. Even in New England, where the shift of cotton mills to the South brought the depression several years before it was generally recognized, many of the smaller electric utilities have gone through the period with steadily increasing output.

The reason why these exceptional utilities, large and small, have been unaffected by the decline in industry is that they have no industrial power load to lose, and other loads have increased during the depression. This fact is highly important, for it shows that however much utilities have been inclined in the past to measure success by the number of industrial engine rooms they have been able to shut down and supply from central stations, industrial power is not necessary for the success of an electric undertaking.

It shows even more. The industrial power load is essentially competitive, and can be secured at only a small margin of profit. This margin is reduced by every new development in the field of small power generation—a field which has been rapidly developed in America during the past decade. Moreover, as the depression has shown, the stability of the industrial power load is inferior to any other part of the central station's business.

An electric company which supplied a certain New England mill city of medium size had two 10,000 kilowatt generators to carry what had been its

[2] Or that branch of the industry concerned with domestic supply. The idea has always been used to justify the business-getting rates and practices of the industrial power branch.

[3] By "electric industry" is meant operating electric companies, incorporated for the purpose of generating and distributing electricity, owning power stations and distribution systems, and financed by stocks and bonds issued with the approval of state regulatory commissions. Holding companies or associations are excluded from consideration.

normal load. On a morning in 1928 only one machine was running, and the indicator stood at 2,000 kilowatts. What had become of the rest of the load? The watch engineer shrugged his shoulders: "Gone west; or south!"

Yet that company had over 20,000 residences connected to its lines. What had been done to make those thousands of homes into a daytime load instead of a load which came on with a sudden peak at the advent of dark? What had been done to encourage the use of those domestic appliances which operate through the day as well as at night, which use a large amount of electricity, and which bring so much satisfaction to their owners? Nothing, or less than nothing; their use had actually been discouraged.

An electric range, it seemed, required a 7½ kilowatt transformer to be set on a pole near the house, and required heavy wires between the house and transformer. That one transformer, to be sure, would take care of a total of six ranges, on account of the diversity in the time and manner of their use, but the danger was that for a number of years, at least, only one range would be sold in a neighborhood. That would result, at least for a preliminary period, in a distribution system dotted with large transformers serving isolated ranges at an investment cost incommensurate with the additional output the ranges would occasion. Therefore, according to the reasoning of the company's economists, the electric range was something to be discouraged.

Just about the time the depression became general the company changed hands, and the new owners were quick to see that their only hope lay in developing the domestic load. Range selling began with all the organized enthusiasm that could be worked into a commercial campaign. There were drives, teams, bonuses, and a siren squealing through the office building whenever news of another range sale was reported. But the reform came too late. Limited purchasing ability had come with the depression, and another 10 years must elapse before the lost power load can be replaced by a domestic load through use of conventional methods.

If it could be brought about at once; if half the residences in that city could be equipped with electric ranges and a third with water heaters, the additional residential consumption would load those two 10,000 kilowatt turbines again, and idle capacity would be a thing of the past.

The same reasoning applies to the electric industry as a whole. In the United States over 20,000,000 homes are wired for electricity. In power stations there is generating capacity of some 30,000,000 kilowatts—just about enough to take care of a fully developed domestic load.[4]

The Domestic Load

Whether an electric utility has neglected to develop its domestic load in the past or whether it has striven to get it established, the result is usually about the same. Less than 10% of our homes are fully equipped with electrical appliances.[5]

There are refrigerators and washing machines in plenty; these appliances almost sell themselves. But they require a comparatively small amount of

[4] Assuming that all the installed capacity is suitable for "base load" operation, which, of course, it is not.

[5] Fortunately, there are some shining exceptions. The municipal plant of the City of Winnipeg, with some 40,000 residential consumers, already has more than half of them equipped with electric ranges, and nearly half equipped with electric water heaters.

electricity for their operation—perhaps 500 kw. hrs. a year. Although an addition of this amount about doubles the present average domestic consumption, it offers no substitute for the lost power load.

It is the range and the water heater (omitting the house-heater from consideration for any but mild climates until the development of "reversed refrigeration" shall make practicable an efficiency of several hundred percent) on which the electric industry must depend for a substantial multiple of the present residential load. They are conventionally rated as requiring 5,000 kw. hrs. a year—six or eight times the present average residential consumption. Their use would not only make up in volume the lost power load but would give a better distribution throughout the day, and would have a stability which the industrial load does not possess. It is to make their use possible that modern stepped rates, where adopted, have a low step ranging from 1 cent to ⅜ of a cent, and yield an average rate, for a fully electrified household, of 1½ cents or less.

But the public fights shy of the electric range. A popular conviction of many years standing holds that the electric range is slow, expensive to operate, and that its first cost is prohibitively high.

Until about 1929 the conviction was justified. A range whose burners took 15 minutes to reach working temperature, and whose oven took half an hour or more, required an amount of planning to which the ordinary housewife is naturally averse. Even after all electricity-saving but time-wasting expedients were employed, a 3-cent rate made the cooking bill run to $5 or $6 a month. Finally, an initial cost of about $200 took the range out of the reach of the general public.

In recent years all that has been changed. Electric ranges are now available with speeds of 2 and 7 minutes for burners and oven respectively, which is fast enough for any purpose. A domestic rate giving an average of 1½ cents a month will make the cooking bill less than $3, which is low enough to meet any competition when convenience and the superiority of the product of the electric oven are taken into consideration. And the cost of a range, installed, has come down to $70, which again is a competitive figure.

The characteristics of the electric range load make it very attractive to the utility. Although a single isolated range makes a demand of 7½ kilowatts on the capacity of the utility's distribution system, when a number of ranges are used in a community the combined demand, divided by the number of ranges, gives an average of one kilowatt or less, on account of the diversity in the time and conditions of use in various residences. Therefore, the utility has to provide a capacity of only about one kilowatt to secure a consumption of 1,500 to 2,000 kw. hrs. a year, which is as favorable a relation between investment and volume of business as was characteristic of the lost power load.

The case of the electric water heater is not so easily established as the range, from the consumer's standpoint. To the utility, however, it is even more attractive than the range, because its storage capacity enables it to be kept off the peak load of the power station, and off-peak electricity can be sent out at a very low cost. But from the consumer's standpoint its use can be justified only by a rate low enough to compete with fuel-burning heaters, with some allowance for its neatness and the

fact that no products of combustion have to be disposed of.

Using the 3,600 kw. hrs. a year conventionally assumed for the consumption of an electric heater, the monthly cost of hot water would be $3.60 at a modern stepped rate which had one cent for the lowest step. While this is low enough to make the electric heater appeal to those who value the peculiar convenience of installation it possesses, a rate of approximately ½ cent is necessary to enable it to compete with fuel burners of nearly the same convenience of operation. Such a rate is possible, and some have already been established; at least a 1-cent rate is within the reach of even a small power station.

Appliance Service

But granted that the electric range and water heater, added to lights and other incidental equipment, would result in a residential load that would absorb the idle capacity of the electric industry, and granted that the consumption of such appliances would more than compensate for the lost power load, what possibility is there that residences will become electrically equipped within the next few years in sufficient numbers to neutralize the missing industrial load? Very little, if the future is to be governed by the ways and methods of the past.

The electric range has been revolutionized, both in performance and price, but the old prejudice against it remains, and even if it did not, the public's purchasing power is very limited at the present time. Electric rates are coming down; a few progressive companies and municipal plants have established very creditable domestic rates; but in general the lowest block of domestic rates has not received the attention it deserves.[6] In rate cases the tendency of the public's representatives is to consider only the highest step, on the theory that it is only the cost of a starveling amount of electricity which interests the public at large. And utilities are reluctant to reduce the lowest step on their own initiative because of the apparent conflict with commercial and power rates. In the normal course of events it may require another decade for the example of progressive utilities to permeate the industry.

What can be done to break with custom and precedent, and bring about a prompt electrification of our residences?

First, electric utilities must reverse the practice of waiting until they receive a sufficient residential load to justify a low rate. They must establish, now, a rate so low that it will dispel the old idea that "electrical appliances are expensive to operate" and will be an incentive to put them to work, even though the rate can be justified only on the assumption that appliances will be connected to the lines.

Such a course will require courage. It will mean a temporary lessening of income from the 10 or 15% of homes which already have a substantial amount of electrical equipment. It will mean a revision of contracts with such smaller utilities as are at the moment dependent on purchased power. It will mean educating those involved in rate cases to the idea that it is the woman with no servants at her command, rather than the wealthy faddist, who needs the convenience afforded by electrical appli-

[6] The "three-meter rate" of the City of Winnipeg is too detailed to be quoted in full, but deserves mention for its liberality and quaintness. Lighting: 3 cents to ⅗ cent. Heating and cooking: ⅗ cent. Flat water heating rate: $3 a month for a 1 kw. heater, with the privilege of disconnection during the winter months. Under these rates the average residential consumption has reached the extraordinary figure of 4,518 kw. hrs. a year (1934).

ances, and that bickering over the cost of 25 kw. hrs. a month will no longer pass for devotion to the public interest.

Second, utilities must extend the scope of their services to supplying their customers with electrical appliances and maintaining them in operating condition.

If electrical appliances were rented out by utilities, the obstacle of limited purchasing power would be eliminated. Then, if appliances were maintained by the utilities, apprehension about reliability, maintenance, and ultimate life would be abolished, and "sales resistance" would become a thing of the past.

This scheme is nothing new. It was employed 50 years ago by the gas industry during the period of competition between "coal gas" and "water gas" companies, and traces of the practice still survive in some of our public utility laws. It is now employed by both gas and electric utilities in England where competition between the two industries is very keen. It has been tentatively tried by both electric companies and municipal plants in this country, with rather astonishing results.

If the trial has been only tentative, and our utilities have not made a complete application of the scheme, the reasons are not hard to find. In times like these, any company may well hesitate about substantially increasing its capital for the purpose of undertaking a pioneering or "radical" venture, especially if the venture is likely to encounter opposition and the industry is already somewhat under a cloud.

Opposition is sure to be encountered. Retailers of electrical appliances already petition legislatures and regulatory commissions to prevent utilities even from selling appliances at retail prices. If utilities should offer to supply and maintain appliances at cost, a storm of protest may be expected from those who subordinate public service to their own profit. Also regulatory commissions that have to approve all securities issued by public utilities may be expected to frown on the idea of new issues for the purpose of supplying the multitude with something which has commonly been regarded as a luxury rather than a necessity of modern life.

The support of some national agency would go far toward quieting such opposition. Now that the Tennessee Valley Authority has raised the standard "Toward an Electrified America" it is difficult to see how Federal support could be refused to a movement designed to complete the equipment of the 20,000,000 homes which are already wired for electricity.

Manufacturing and Employment

There are several reasons why the Federal Government, consistent with its power program, should give its support to a general movement on the part of utilities to equip American homes with electrical appliances, in addition to the social advantages envisioned by the Tennessee Valley Authority.

In the first place such a program would be a powerful stimulus to manufacturing in the production of the appliances themselves. How much would be involved can best be appreciated by comparing the cost of household appliances with the amount which has been invested in the properties of the public utilities.

The amount of the investment by the utilities is roundly given as $12,000,000,000—a huge sum, and meaningless unless reduced to a tangible unit.[7] If it is divided by the number of customers supplied with electricity it reduces to

[7] The propriety of this figure has often been questioned. It is given here, uncritically, for the purpose of comparison.

an average of about $450 a customer.

In comparison with the average investment of $450 made by the utilities themselves, there are the range, refrigerator, washing machine, ironer, and water heater, which at present minimum factory prices cost about $250.[8] It is apparent, therefore, that the task of equipping American homes with electrical appliances involves a manufacturing program amounting to billions of dollars.

In the second place, some electrical appliances occasion a substantial expense for their installation. With its 7½ kilowatts capacity the electric range requires a special circuit inside the house, a heavy three-wire service leading from the house to the street, and heavy wires and transformers in the utility's distribution system in the immediate vicinity.

This installation expense, involving as it does different kinds of material and labor, makes domestic electrical appliances of special interest at a time of general unemployment.

An analysis of the cost of installing a number of ranges in a certain locality —a number equivalent to the utility's sales for an entire year under ordinary circumstances, but snapped up in a matter of days when the utility recently offered to install and maintain them on a rental basis approximating cost—showed the following average installation expense:

Uncrate, test, deliver		$ 3
House wiring		
Labor	$16	
Material	20	36
Outside work		
Labor	7	
Material	9	16
		$55

[8] Range, $50; refrigerator, $90; washing machine, $45; water heater, $50; and ironer, $30; Total, $265.

In this case the expense incurred by the utility in installing the ranges almost equalled the cost of the ranges themselves, but beyond that interesting fact are the amount and distribution of employment indicated by the analysis. Installing the ranges made work for electrical contractors and the utility in the proportion of ⅔ and ⅓ respectively; the entire disbursement was made locally, but about ½ the expense represented miscellaneous materials and supplies manufactured outside the locality.

An analysis of the cost of installing the water heaters which went out with the foregoing ranges, in the ratio of one water heater to every three ranges, gave a smaller total,[9] but an equally satisfactory distribution. The average installation cost was $24, of which $9 went to electrical contractors and $15 to plumbers; and here again about ½ the expense represented labor and the other half materials and supplies.

A further consideration should not be overlooked when examining the work-making aspect of electrical appliances, and that is their maintenance. All appliances wear, even if they do not wear out. The time comes when the washing machine and the refrigerator go on strike; the heating elements in range and water heater disintegrate. Failures may occur at long intervals, and the expense to any individual may be slight, but in the aggregate it is substantial. If one man is required to take care of an average of 1,000 appliances, it follows that for every 1,000 fully equipped homes the services of four or five trained mechanics will be permanently required. For even a small utility, supplying a population of only

[9] As was to be expected, because the water heater usually follows the range, and in installing the latter a provident utility will provide capacity for both appliances in lines, transformers, and service, leaving only inside work to be done when the water heater is acquired.

20,000, this means the addition of from 15 to 20 men to its permanent payroll.

In Perspective

If utilities have neglected to develop the domestic load heretofore, the fault lies with them rather than the load. The industrial power load was spectacular, it was easily acquired, and it was easily administered in comparison with the multitude of personal contacts which would have been involved in acquiring a domestic load of the same volume. The utilities merely took the easiest way. But there were some who were not too absorbed in the scramble for power customers to perceive the possibilities of the domestic load and the role it must eventually assume.

It is over five years since the Detroit Edison smashed one of the obstacles to domestic electrification by designing and manufacturing a high speed electric range priced for quantity production. It is several years since the president of the Hartford Electric Company issued his warning against the conventional rate. In the interval, several low rates have been established, notably by the Tennessee Valley Authority which, with no inhibiting tradition behind it, and unobstructed by the politics which play about "regulation," has set a rate which will affect the rates of all other utilities —companies and municipal plants alike. Moreover, electrical appliances are now generally manufactured at prices which remove them from the luxury class.[10] All that is needed to expedite the electrification of our residences is for some Federal power authority to extend the scope of its service to supplying and maintaining electrical appliances at cost.

Such a move would reach beyond the confines of any "authority"; it would affect the whole industry, and tend to replace with cooperation the apparent competition between electric utilities and the Federal Government. "Toward an Electrified America" is not an objective which can be limited to those who live in a particular place. Federal support, if not Federal assistance, should go to any agencies which set out to achieve the desired goal.

But whether or not this course is taken, the domestic load will eventually be secured. Regardless of alarmist headlines, and regardless of whether or not the industrial load ever comes back to central stations, there can be no doubt about the opportunity now awaiting the electric industry. Before it lies the consuming capacity of 20,000,000 American homes—a load which in volume, diversity, and stability surpasses anything it has ever supplied.

[10] Although it is still possible for those who prize so-called "talking points" to pay two or three times the necessary amount.

Exemption of Homesteads from Taxation: A Case Study in Oklahoma

By RAYMOND D. THOMAS*

A new and interesting application of the "tax exemption" doctrine is appearing in the growing agitation for the exemption of homesteads from taxation. The movement bears possibilities of a broad extension of the exemption practice into the property tax field. It has a wide popular appeal on the grounds of property tax relief and the encouragement of home ownership. Candidates for public office are discovering in the homestead exemption proposal an effective vote-gathering device.

Restricted property exemptions in state tax systems are of fairly long standing. In the main, these exemptions have been confined to relatively small amounts in personal property assessments. Heads of households and ex-soldiers as a rule have been the chief beneficiaries of these exemptions. Massachusetts[1] favors soldiers and sailors (and their widows) of the Civil war, the Spanish war, the Philippine insurrection, and the World war with a $2,000 exemption from taxation. This exemption is allowed, however, only to veterans who are disabled by reason of military or naval service. A similar exemption is allowed in Michigan[2] under somewhat more rigid conditions, including maximum age restriction, than those of Massachusetts. This early variety of "soldier bonus" legislation was illiberal enough to place certain bars of age, income, property ownership, and other conditions to the application of the exemption. Service in the Spanish war, Civil war and World war is sufficient in Oklahoma[3] for a $200 increase in the normal personal property tax exemption for resident heads of families. The legislation just cited is illustrative of the homestead exemption movement in its first stage of development.[4]

During 1933 and 1934, five states gave considerable impetus to the homestead tax exemption movement by enactments broadening the area of benefits far beyond the preferred ex-soldier class in the population. Texas in 1933, by constitutional amendment,[5] exempted residence homesteads from the ad valorem tax for state purposes in the amount of $3,000 of the assessed taxable value of such property. It is provided, however, that this exemption shall not be applicable to that portion of state ad valorem taxes levied for state purposes remitted within those counties or other political subdivisions now receiving any remission of state taxes. Texas limited homestead exemption to state ad valorem levies.

Louisiana took the constitutional route in 1934 to exempt

"from state, parish and special taxes, the homestead, bona fide, consisting of lands, not exceeding one hundred and sixty acres,

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[1] General Laws, Ch. 59.

[2] Compiled Laws, 1929, § 3395, as amended by P. A., 1933, Act. 243.

[3] O. S. 1931, § 12319.

[4] California makes constitutional provision for exemptions of soldiers and sailors. See Const., Art. XIII, § 1¼. It is not intended in this article to cite all states which have made provision for limited tax exemption to soldiers and sailors.

[5] Const., Art. VIII, § 1-A (Ratified at election, Aug. 26, 1933).

buildings and appurtenances, whether rural or urban, owned and occupied by every head of a family, or person having a mother or father or a person or persons dependent upon him for support, to the value of Two Thousand Dollars."[6]

Sound judgment on the part of the proponents of this amendment was exercised in protecting the public treasuries against a sudden drop in receipts with a sensible provision that the homestead exemption benefits would accrue only to the extent that the Legislature provides "replacement" funds in the Property Tax Relief Fund.

Oklahoma by constitutional change in 1933 completely relieved all property from taxation for state purposes.[7] This change came, however, as a result of agitation for general property tax reform without any connection with homestead exemption.

Mississippi joined the exemption parade in 1934[8] but with a much more cautious stride than Texas and Louisiana. The exemption was restricted to state ad valorem levies up to $1,000 assessed value and to an area not to exceed 40 acres. To gain admission into the exempted homestead class, the taxpayer must be a head of a family and a resident of the State. False representations of taxpayers claiming exemption constitute a felony.

Florida's sunshine and dreamy rivers gained an ally in protecting the blessings of home ownership against the hurricane hazard in 1934 in a most liberal homestead exemption.[9] The constitutional homestead in this State was accorded a $5,000 exemption from all taxes, excepting special assessments to resident citizens who are heads of families. By this sweeping enactment Florida entered an era of all but taxless homes.

This homestead exemption agitation registered its telling effects in the 1934 state political campaign in Oklahoma. The Democrats probably could have ridden safely into office without any platform. But platforms are handy scaffoldings for decorative paraphernalia no less for political purposes than for aesthetic reasons. At any rate, one of the most alluring decorations of the platform of the Oklahoma Democrats in 1934 had Homestead Exemption written large. The election is past. The days of fulfillment are at hand. Homestead tax exemption came out of the Legislature in the form of a proposed constitutional amendment, pending a vote of the people in September, 1935.[10] Hopeful signs are appearing which indicate that the people of the State will not be unacquainted with, nor unconcerned about, the fiscal effects inevitably accompanying this change in the property tax system.

Purpose of the Investigation

The post-election days of 1934 apparently brought assurance that Oklahoma would have homestead tax exemption in one form or another. This seemed to be the accepted state of popular sentiment. The encouragement of home ownership by means of tax exemption was only one among a number of proposed social and economic reforms. Into this situation came the Brookings Institution which was commissioned to make a general study of taxation, financial administration, local government, education, and social reform in the State. Among the early decisions reached by Dr. H. D. Simpson and those associated

[6] Const., Art X, § 4 (Adopted Nov. 6, 1934).
[7] Const., Art. 10, § 9 (Approved at election, August 15, 1933).
[8] G. L. 1934, H. B. 321.
[9] Const., Art. X, § 7 (Added by L. 1933, House Joint Resolution 20, Adopted Nov. 6, 1934).
[10] House Joint Resolution No. 4, 15th Session, 1935.

with him in taxation studies was that of the desirability of measuring the effects of the homestead tax exemption proposal on local government revenues and on other classes of property owners and taxpayers.

The effects of any given amount of homestead exemption on the total revenue receipts from property taxes are definitely measurable. These measures, however, are not readily available as a general rule from the local assessment records in the various states. Census data on home ownership and tenancy are helpful. Dependable conclusions can be derived only from sample studies of representative types of communities, rural and urban. The term "homestead" must be defined and exemption amounts must be assumed for sampling purposes. The purpose here is to present in brief form the method employed with a summary of the results obtained in this sample or case study.

Time and the availability of funds forced a restriction of this study to a limited sample area. The City of Stillwater was considered to be fairly representative of the several conditioning elements in the problem. Stillwater is the home of one of the major institutions of the State, the Oklahoma Agricultural and Mechanical College, a county seat, and the center of an average quality rural trade area. With a resident population of approximately 8,000 (exclusive of college students), Stillwater has almost an equal division as between owner occupied and tenant occupied homes—49.6% of the former and 50.4% of the latter class. The percentage of public service property, however, in the total assessed value of all taxable property within the corporate limits of Stillwater is less than the percentage of public service property in the larger urban areas in the state.[11] This condition overweights the assessed value of residential real estate in the sample studied as compared with areas where public service property is of relatively greater importance in the local tax system and thus to this extent tends to overemphasize the effects of homestead tax exemption on the property tax-base.

The objective sought in the Stillwater study was a factual basis for measuring the effect on the property tax-base and on the local tax scheme of given amounts of homestead exemption. A "homestead" was defined as either a separate residence occupied by an owner or a residence of not to exceed two flats, one of which was occupied by the owner. Field workers were divided into two groups. One group made a house-to-house canvass and recorded the type of occupancy, tenant or owner, of each residential property. The other group took from tax rolls the assessed value of each residential property.[12] Calculations were made for assumed exemptions of $1,000, $2,000, and $3,000. In Table I are shown the results of calculations made from the data.

Results of the Study

It can be quickly observed in Table I that a $3,000 homestead exemption in this sample area would fall short by only a small amount of entirely relieving residential property occupied by owners of any portion of property taxes. If the exemption point should be fixed at $1,000, the total assessed value of

[11] Public service property constituted nearly ¼ of the total assessed value of property for the entire State in 1934, but only $\frac{1}{16}$ of the assessed value in Stillwater (1933). Stillwater has municipal electric and water utilities which, together with a high ratio of residence to total property, largely account for the difference.

[12] Credit is due Professor F. E. Jewett and Professor L. S. Ellis, Oklahoma Agricultural and Mechanical College, for supervision of field workers.

TABLE I. EFFECT OF HOMESTEAD EXEMPTION ON THE PROPERTY TAX-BASE IN STILLWATER, OKLAHOMA.

Assessed Valuation by Classes of Property*		Size of Homestead Exemption	Assessed Value Exempted by Each Class	Per Cent of Total Assessed Value Exempted by Each Class	Effective Tax Reduction for Each Class†
Class	Valuation				
Real estate.....	$2,675,297	$1,000	$675,488	20.76%	$18,280
Public service property.....	210,828	2,000	895,488	27.51	24,222
Personal property..	367,207	3,000	942,617	28.97	25,510
Total.....	3,253,332	Entire Assessed Valuation of Homesteads	973,582	29.93	26,348

* Assessed valuation for 1933 used.
† 1933 tax rate levied, 27.0625 mills. This rate includes sinking fund levies, which means for this study it is assumed that the exemption would apply to all levies, including debt service.

property in this community would be reduced by 20.76%. Strangely enough, as far as the net effect on the property tax-base or on taxes eliminated are concerned, it makes little difference whether the exemption is $2,000, $3,000, or the entire assessed value of all homesteads.

A total of 1,657 homes in this study came within the category of "exemptable" homesteads.[13] Of this total, 821 were occupied by owners and 836 by tenants. As of the date of the study, almost exactly half of the total number of "exemptable" homesteads were qualified for the exemption. The assessed valuations of these 821 homes were classified according to the size of the assessment with the results as recorded in Table II.

Homestead exemption, in the case of assumed amounts of $1,000, $2,000, and $3,000, operates to reduce the property tax-base. It is interesting to observe, too, the effect on the class of property represented in homes occupied by owners. Stillwater is a community of moderate sized residential properties. Of the total assessed value of homes occupied by owners, 72% represented properties assessed below $2,000. In actual number of homes, 88% of the total fall below the $2,000 assessed value line. Chart I shows, in the areas in black, the total assessed value of all homesteads by assessed value classes.

The effects of assumed conditions of exemption—that is, in amounts of $1,000, $2,000, and $3,000 respectively—on the total assessed valuation of homesteads can be seen in Charts II, III, and IV. An exemption of $1,000, it will be observed in Chart II, greatly reduces the size of the black area by cutting off at the bottom all assessed values below the $1,000 line. Step by step, the total assessed value of homestead property disappears with the

TABLE II. NUMBER OF HOMESTEADS CLASSIFIED ACCORDING TO ASSESSED VALUATIONS.

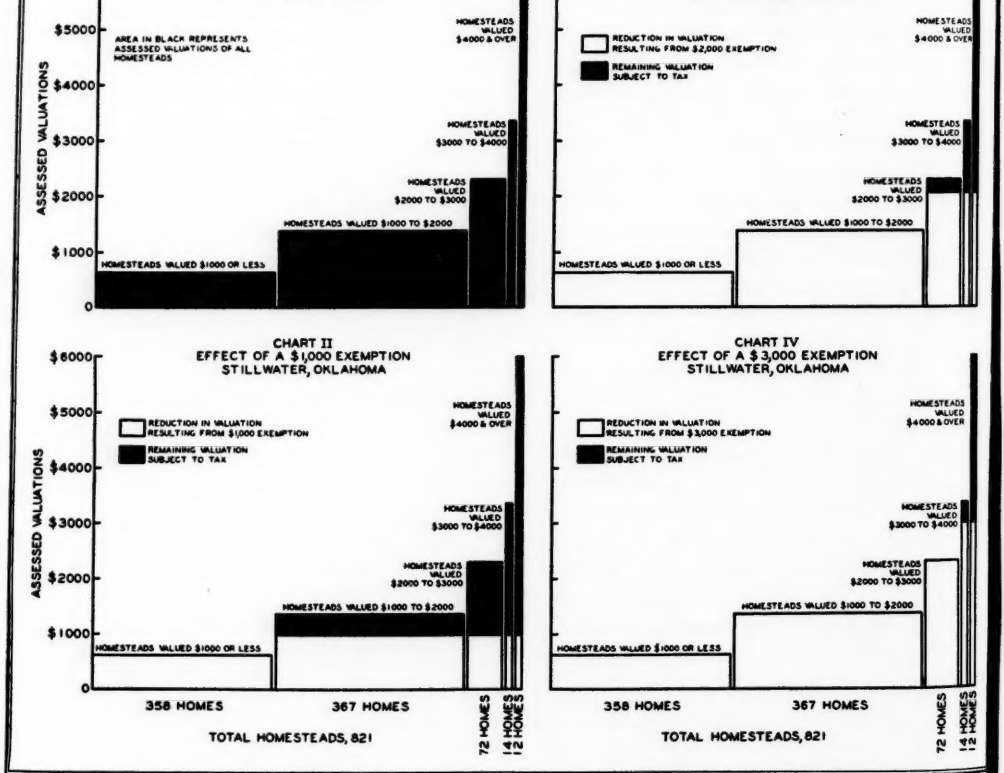
Number of Homes	Assessed Valuation Class	Total Valuation
10	$4,000 or over	$ 55,640
14	3,000 to $3,999	47,325
72	2,000 to 2,999	164,650
367	1,000 to 1,999	493,199
358	Less than 1,000	212,768
821		$973,582

[13] By "exemptable" homesteads is meant a residence, either single or not more than two flats, which is subject to the benefits of tax exemption when and if occupied by owners.

increase in the size of the exemption, leaving only a relatively small portion of the homestead assessment base when the exemption is increased to the $3,000 point.

It is from the conditions pictured in these four charts that proponents of homestead exemption draw their most effective arguments. In a sense, homestead exemption is admittedly class legislation. It appears clear from an examination of Charts I, II, III, and IV that provision for exemption of homesteads from taxes in an amount of say $1,000 or $2,000 of assessed value will yield particular benefits to small home owners which is the largest group within the total. If size of homesteads as represented in assessed valuations is a criterion of net resources of persons living in their own homes, homestead exemption operates to the advantage, relatively, of the masses in the middle and lower economic strata. From this point of view, then, this seems to be another occasion when the tax exemption doctrine should be accepted with enthusiasm by the vast majority of the electorate.

The purpose of this analysis is not to give critical consideration to all possible or probable economic and social



effects of homestead tax exemption. A generalized study to determine the probable immediate state-wide effects of homestead exemption on the property tax-base and on taxes paid on property was recently made by L. D. Melton of the research staff of the Oklahoma Tax Commission.[14] Census figures and the data compiled in the Stillwater survey were used in this general analysis. Had the assumed exemption of $1,000 been 100% effective in reducing the property tax-base, the total assessed value of property would have fallen by $821,000 ($1,000 x 821, in which the factor 821 represents the total number of homes occupied by owners). Many homesteads, however, were assessed at less than $1,000, thus reducing the property valuation by only $675,488. Loosely speaking, we can say that the $1,000 exemption was, therefore, 82.3% effective ($675,488 ÷ $821,000). This percentage or index of the effectiveness of the assumed $1,000 homestead exemption was applied to homes occupied by owners by counties for the entire State (Table III).

The average reduction in the property tax-base for the entire State, on the basis of figures in Table III, was estimated at 14.7%. In 48 counties the reduction is greater than the state average; in 29 counties the reduction falls below the average. The distribution of counties above and below the average is shown on Chart V.

Implications of Homestead Exemption

It is manifestly not an easy task to secure dependable measures of the long-time social and economic effects of homestead exemption. Obviously, areas with a relatively high percentage of owner occupied homes will have a greater number of "benefited" taxpayers than will the areas where a high percentage of tenancy prevails. On Chart VI home ownership distribution is pictured by counties for the entire State. Marked variations in home ownership conditions as between county and rural areas are indicated on the map chart. It would appear that the property tax-base will be less adversely affected in areas of high tenancy. But this would not necessarily be true, for the reason that high tenancy sometimes exists in regions of low incomes and low total property assessment. Instances of correspondence of these conditions both for city and rural areas will be readily recognized on Chart VI by persons who are fairly familiar with economic conditions in Oklahoma. It will be observed on Chart V that the property tax-base will be reduced by a relatively high percentage generally in the southern and southeastern sections of the State where the percentage of home ownership (Chart VI) is relatively low. It can be said, therefore, that not only will homestead exemption benefit relatively fewer taxpayers in high tenancy areas than in high ownership areas, but will in some cases have a larger adverse effect on the tax-base and on local government budgets. Certainly, it is a safe generalization to say that the social, economic, and fiscal effects of homestead exemption are by no means uniform when they are considered for a state area. It follows, therefore, that the incidence of social and economic benefits of homestead exemption is a mixed question.

Conclusions

The foregoing analyses would seem to warrant a general statement of at least tentative conclusions with respect

[14] "A Study of the Probable Immediate Effect of Homestead Tax Exemption in Oklahoma," *Bulletin No. 2*, Oklahoma Tax Commission, Research and Statistics Division, February 25, 1935.

TABLE III. SHOWING HOME OWNERSHIP IN OKLAHOMA AND APPROXIMATE IMMEDIATE REDUCTION IN ASSESSED VALUATIONS, BY COUNTIES, RESULTING FROM $1,000 HOMESTEAD TAX EXEMPTION 82.3% EFFECTIVE

(Data from U. S. Census, 1930)*

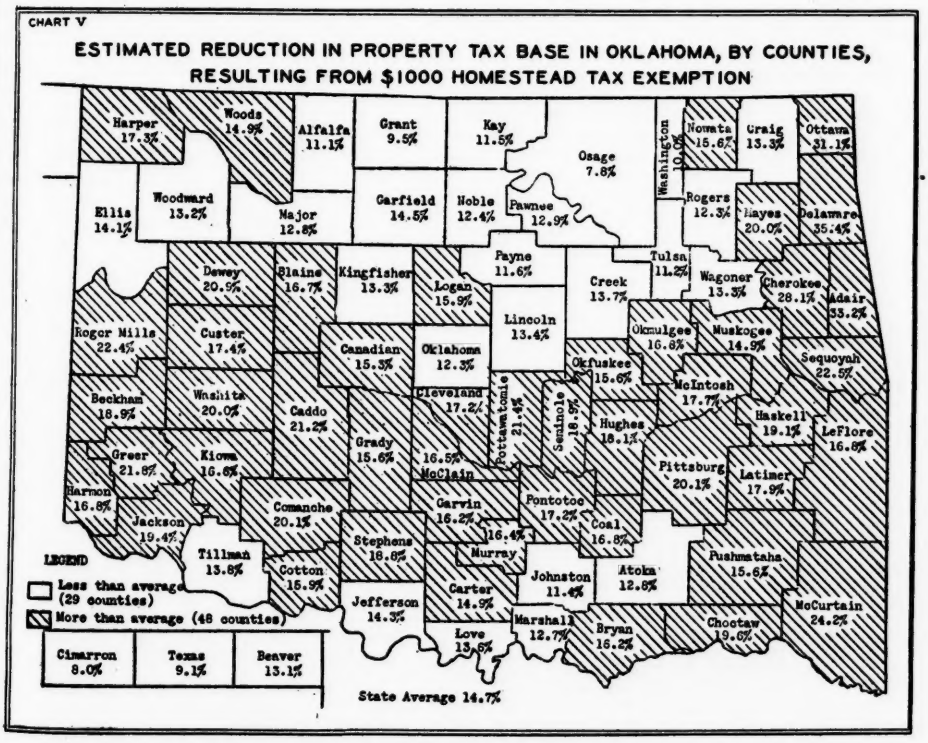
County	Total Families	Families Owning Homes	Percentage of Home Ownership	Total Assessed Valuations, 1934	Estimated Reduction in Valuations at $1000 Exemption, 82.3% Effective	Percentage Reduction in Valuations
Adair	3,052	1,462	47.9%	$3,621,372	$1,203,226	33.2%
Alfalfa	3,757	2,121	56.5	$15,794,806	1,745,583	11.1
Atoka	3,164	900	28.4	5,786,000	740,700	12.8
Beaver	2,702	1,675	62.0	10,511,268	1,378,525	13.1
Beckham	6,729	2,810	48.8	12,248,555	2,312,630	18.9
Blaine	4,753	2,183	45.9	10,763,751	1,796,609	16.7
Bryan	7,162	2,358	32.9	11,963,102	1,940,634	16.2
Caddo	11,391	4,189	36.8	16,249,861	3,447,547	21.2
Canadian	6,712	3,176	47.3	17,051,882	2,613,848	15.3
Carter	9,851	3,765	38.2	20,820,983	3,098,595	14.9
Cherokee	3,760	1,537	40.9	4,497,267	1,264,951	28.1
Choctaw	5,440	1,751	32.2	7,355,763	1,441,073	19.6
Cimarron	1,320	722	54.7	7,388,784	594,206	8.0
Cleveland	5,516	2,404	43.6	11,471,366	1,978,492	17.2
Coal	2,576	937	36.4	4,599,595	771,151	16.8
Comanche	7,849	2,999	38.2	12,294,066	2,468,177	20.1
Cotton	3,504	1,187	33.9	6,126,063	976,901	15.9
Craig	3,871	1,849	47.8	11,440,884	1,521,727	13.3
Creek	15,176	4,920	32.4	29,543,594	4,049,160	13.7
Custer	6,445	3,000	46.5	14,176,499	2,469,000	17.4
Delaware	3,348	1,720	51.4	3,994,806	1,415,560	35.4
Dewey	3,183	1,507	47.3	5,946,368	1,240,261	20.9
Ellis	2,612	1,381	52.9	8,050,367	1,136,563	14.1
Garfield	11,777	6,167	51.9	34,947,495	5,075,441	14.5
Garvin	6,803	2,699	39.7	13,736,608	2,221,277	16.2
Grady	10,682	4,292	40.2	22,685,119	3,532,316	15.6
Grant	3,733	2,051	67.0	17,717,861	1,687,973	9.5
Greer	4,490	1,766	39.3	6,668,162	1,453,418	21.8
Harmon	3,043	1,136	37.3	5,555,206	934,928	16.8
Harper	1,893	1,117	59.0	5,307,104	919,291	17.3
Haskell	3,411	1,031	30.2	4,434,232	848,513	19.1
Hughes	6,652	2,208	33.2	10,024,296	1,817,184	18.1
Jackson	6,680	2,568	38.4	10,881,631	2,113,464	19.4
Jefferson	3,893	1,441	37.0	8,304,519	1,185,943	14.3
Johnston	2,928	380	31.1	6,337,449	724,240	11.4
Kay	12,692	5,666	44.6	40,550,575	4,663,118	11.5
Kingfisher	4,056	2,124	52.4	13,147,350	1,748,052	13.3
Kiowa	6,931	2,787	40.2	14,235,047	2,368,594	16.6
Latimer	2,442	869	35.5	3,992,490	715,187	17.9
LeFlore	9,351	2,964	31.7	14,531,815	2,439,372	16.8
Lincoln	7,873	3,221	40.9	19,710,411	2,650,965	13.4
Logan	7,047	3,257	46.2	16,894,933	2,680,511	15.9
Love	2,142	729	34.0	4,424,876	599,967	13.6
McClain	4,557	1,496	32.8	7,442,302	1,231,208	16.5
McCurtain	7,559	2,162	28.6	7,364,608	1,779,326	24.2
McIntosh	5,192	1,421	27.4	6,596,722	1,169,483	17.7
Major	2,970	1,479	49.8	9,503,360	1,217,217	12.8
Marshall	2,434	778	32.0	5,039,089	640,294	12.7
Mayes	3,909	1,779	45.5	7,335,253	1,464,117	20.0
Murray	2,871	1,145	39.9	5,762,056	942,335	16.4
Muskogee	15,647	6,170	39.4	34,090,005	5,077,910	14.9
Noble	3,841	1,814	47.2	12,050,798	1,492,922	12.4
Nowata	3,215	1,407	43.8	7,410,457	1,157,961	15.6
Okfuskee	6,367	2,047	32.2	10,784,974	1,684,681	15.6
Oklahoma	55,720	21,394	38.4	143,543,772	17,607,262	12.3
Okmulgee	13,215	4,900	37.8	24,513,943	4,106,770	16.8
Osage	11,273	3,465	30.7	36,528,012	2,851,695	7.8
Ottawa	9,346	4,786	51.2	12,671,950	3,938,878	31.1
Pawnee	4,715	1,949	41.3	12,472,174	1,604,027	12.9
Payne	9,305	3,672	39.5	26,111,676	3,022,056	11.6
Pittsburg	10,966	4,222	38.5	16,603,184	3,474,706	20.1
Pontotoc	7,322	2,774	37.9	13,256,770	2,283,002	17.2
Pottawatomie	16,085	6,794	42.2	26,116,504	5,591,462	21.4
Pushmataha	3,317	930	28.0	4,894,927	765,390	15.6
Roger Mills	3,169	1,536	48.5	5,647,908	1,264,128	22.4
Rogers	4,329	1,738	40.1	11,671,203	1,430,374	12.3
Seminole	18,875	7,521	39.8	32,751,989	6,189,783	18.9
Sequoyah	4,116	1,336	32.5	4,876,173	1,099,528	22.5
Stephens	7,650	2,947	38.5	12,921,267	2,425,381	18.8
Texas	3,359	1,780	53.0	16,054,499	1,464,940	9.1
Tillman	5,814	2,146	36.9	12,761,922	1,766,158	13.8
Tulsa	47,793	18,141	38.0	133,678,543	14,930,043	11.2
Wagoner	4,891	1,560	31.9	9,675,656	1,283,880	13.3
Washington	7,223	3,085	42.7	25,290,970	2,538,955	10.0
Washita	6,713	2,970	44.2	12,204,146	2,444,310	20.0
Woods	4,306	2,318	53.8	12,844,958	1,907,714	14.9
Woodward	3,705	1,988	53.7	12,430,522	1,636,124	13.2
State	564,164	225,266	39.9	1,258,686,473	185,393,918	14.7

*Taken from Melton. *op. cit.*, pp. 9 ff.

to the homestead tax exemption movement.

1. The homestead tax exemption movement is a logical corollary of the current agitation in favor of property tax reform and "mass welfare" legislation. Property tax reform in most states of the Union is an objective which calls for statecraft of a high order, but those who shape a program of desirable reform should beware of the damaging results which might follow from any further extension of the exemption doctrine in the property tax field.

It can be agreed, too, that by and large our social and economic history furnishes abundant evidence of the social stability and security accompanying a high percentage of owner occupied, debt free homes. But it should not be too hastily concluded that homestead tax exemption must be an element in plans and policies designed to encourage home ownership. Other conditions are probably much more important in increasing the number of owner occupied homes than taxes—for example, the interest rate, the home mortgage credit system, unlimited privilege of owners to mortgage their homesteads, lack of effective zoning and the absence of community planning in both country and city, insecurity of occupation and employment, and operation of the property tax system in placing relatively higher assessments on residential real estate than on other kinds of property. If the property tax as it is now func-



Data from 1930 Census. Prepared by Research and Statistics Division, Oklahoma Tax Commission.

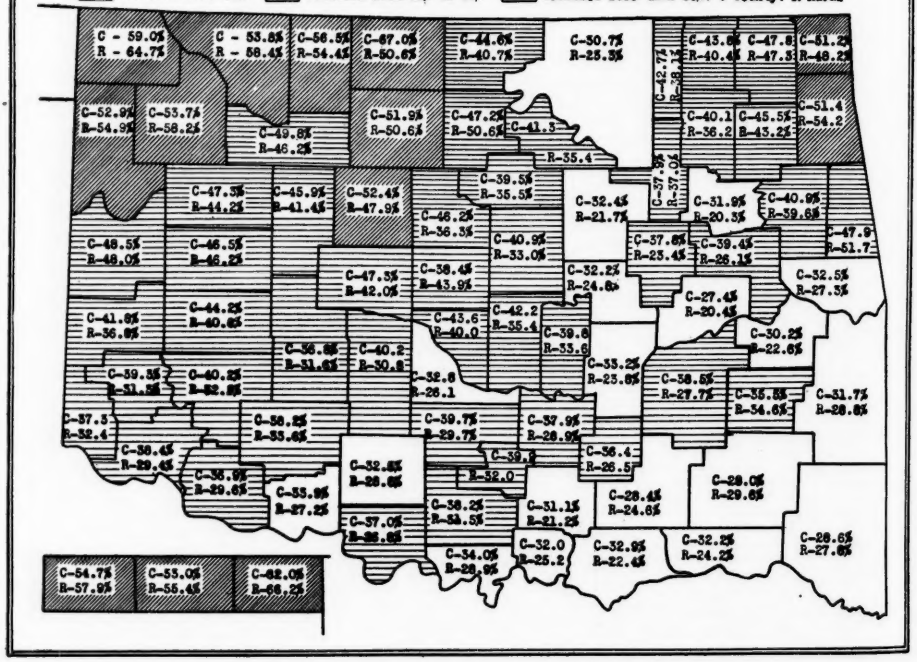
tioning is a barrier to home ownership on account of disproportionately high tax burdens on homes, would it not be a wiser policy to move toward fundamental reforms in the property tax system as a whole than to clutter further the property tax with an extension of exemptions?

2. Analysis of homestead exemption leads directly and quite far into the question of shifting a fairly large portion of the costs of government from one revenue source to another and, to some extent, from one class of taxpayers to another. Homestead exemption will take away a considerable part of the assessed value base of the property tax structure. If budgets are maintained at existing levels, one of three possible courses of action must be followed: (1) immediate upward adjustment of the assessment of the taxable property remaining after exemption or the addition of omitted property, or both; (2) increase the rate to be levied on the assessed valuation remaining without any material change in assessment; (3) leave both assessments and levies where they are and replace the taxes lost through exemption by tapping other sources. The conclusion is inescapable that homestead exemption forces consideration of the entire question of tax policies and tax administration, and the people of any state who are enthusiastic about homestead exemption should be

CHART VI

PERCENTAGE OF HOME OWNERSHIP IN COUNTIES AND RURAL AREAS

Counties over 50% | Counties from 35% to 50% | Counties less than 35%. C-County. R-Rural



Data from 1930 Census. Prepared by Research and Statistics Division, Oklahoma Tax Commission.

certain that the end they seek cannot be realized unless they are willing to go along in a revenue program which will provide the necessary replacement funds.

3. The results of limited studies already made of the probable effects of homestead exemption in Oklahoma evidence the need for further analyses. It would be a fiscal mistake of first magnitude for any state hurriedly to adopt a homestead exemption program without first subjecting the proposal to a strict test application to local and state budgetary and tax situations. This is the course we are attempting to pursue in Oklahoma. If Oklahoma is to have homestead exemption, the people should know what the effects will be. Sample analyses will indicate clearly what the effects on local government budgets and tax rates will be. Already these studies appear to have contributed helpful results. Discussions of the exemption proposal during the summer of 1935 reflect much more sober and objective thought on the matter than was the case during the 1934 fall campaign. Indeed, the exemption proposal submitted by the Legislature to the people for vote next September is nothing more than a question of granting constitutional authority to the Legislature to enact exemption legislation when and if it desires to do so. It may be, however, that the Legislature will consider the adoption of the proposed amendment a mandate from the people that the amendment be validated by appropriate legislation.

But this constitutional power of the Legislature is so hedged about by restrictions that very partial exemption of homesteads is the maximum result that can be attained. In the pending amendment to the Constitution, the maximum exemption amount possible is fixed at $1,500, and the exemption shall not apply to levies for payment of indebtedness heretofore incurred, nor to any special assessment. Nor shall homestead valuations be exempted in any amount from "any and all ad valorem taxes now authorized by law and the Constitution for the support and maintenance of the common schools, including the extra or special ten (10) mill levy as now provided by the Constitution and by law." If this is to be the extent of homestead exemption in Oklahoma, particularly in view of the already existing constitutional prohibition of all ad valorem levies for state purposes, the entire exemption movement is practically meaningless. It will be a kind of homestead tax exemption which in operation does not effectively "exempt."

I. Air Express Service in the United States

By WAYNE L. McMILLEN*

Introduction

AIR express traffic in the United States is relatively insignificant at the present time. It comprises such a small part of the total movement of merchandise that, were there not possibilities of a phenomenal growth, one would scarcely be justified in devoting his time to extended study of the subject. However, the volume of traffic has increased, on the average, about 55% per year during the last four years.[1] While it seems very unlikely that the volume of air express will ever approximate the traffic of any of the surface agencies, yet it is not at all improbable that this class of shipment will become an important part of both tonnage and revenue of air transport companies. Because comparatively little thought has been given to the growth of this part of air carrier service, an attempt to ascertain what policies are necessary and desirable in order to develop air express service seems justified.

Present Organization of the Business. Air express service in the United States is carried on in five different ways: (1) by air express "systems," (2) by "independents," (3) by "ferry" companies, (4) by private industrial companies operating their own express service, and (5) by an airline organized to handle express exclusively.

Of the "systems" there are two: the air express division of the Railway Express Agency, and the General Air Express. These two systems did about 85% of all air express business in 1933.[2] Of this 85%, General Air Express carried ⅔ of the tonnage and received over ½ the revenue,[3] the remainder going to the Railway Express Agency. However, data for 1934 show that General Air Express handled only 40% of the tonnage carried by both systems and received 38.2% of the revenue.[4]

The Railway Express Agency is owned by the railroads, jointly. It handles the ground work for 14 airlines organized into a unified system spreading a rather complete network across the country. It picks up and delivers parcels,

* Former Fellow in Public Utility Economics, University of Illinois. The author acknowledges his indebtedness to Prof. H. M. Gray of the University of Illinois, under whose supervision this study was made; to Prof. D. P. Locklin, Economist for the Bureau of Statistics of the Interstate Commerce Commission; and to Prof. F. D. Fagg, Jr. of the Air Law Institute of Northwestern University for their kindly interest in this investigation. He is especially grateful to Mr. W. A. M. Burden of Scudder, Stevens, and Clark who made his materials available for use in the preparation of this study.

[1] TOTAL ANNUAL DOMESTIC AIR EXPRESS TRAFFIC*

Year	Volume of Traffic
1930	359,523 lbs.
1931	788,059 lbs.
1932	1,033,970 lbs.
1933	1,510,215 lbs.
1934	2,133,191 lbs.

* *Air Commerce Bulletin.*

[2] Computed from Table 16, p. 57 of an unpublished study, "Air Express in the United States," by W. A. M. Burden, of Scudder, Stevens and Clark.

[3] *Ibid.*, Table 20, p. 67.

[4] General Air Express (referred to hereafter as G.A.E.)—poundage, 580,432 lbs.; revenue, $255,795. (Letter from L. G. Brower, General Manager, G.A.E., April 10, 1935.)

Railway Express Agency (referred to hereafter as R. E. A.)—poundage, 870,111 lbs.; revenue, $413,000. (Letter from F. S. Gorby, Public Relations Dept., R.E.A., February 28, 1935.)

It is likely that within a short time the business of G.A.E. will be merged into the air express division of the R.E.A.

solicits air express through special air express representatives, and also through its regular rail express agents. It does the bookkeeping, part of the advertising, and sets the rates for its air express service. It utilizes the service of Western Union Telegraph Company for picking up and delivering certain of the lighter parcels. The individual airlines belonging to the system also solicit and advertise the service. The system insures shipments and provides complete C.O.D. service. From the revenue received for air express the Agency subtracts its out-of-pocket expenses plus 12½% of the remainder, which applies on the overhead, and turns the rest over to the airline as its compensation for carrying the shipment.[5]

General Air Express is an interline association of about six airlines covering approximately 65% of the air mail route mileage in the United States. It provides pick-up and delivery service through Postal Telegraph Company for the member lines. In large cities the association has established its own sales forces, but the greater part of the solicitation, advertising, and bookkeeping is done by the individual companies. Rates are set by a conference of representatives of the member lines. General Air Express is not a corporation. The feeling is that were it made a corporation, it would be contrary to law, for the Air Mail Act of 1934 states that no company holding an air mail contract shall own stock in a company engaged in any other type of activity.

The "independents" are those scheduled air transportation companies which are connected with neither of the systems described above. They handle their own express business without association in an interline organization, or with the Railway Express Agency. These independents originated approximately 5½% of all air express in the United States in 1933.[6]

Air "ferry" companies are those operating usually over some route to a place almost inaccessible by surface facilities, or where surface facilities require a round-about routing. Examples are the ferry service over San Francisco Bay from San Francisco to Oakland and the former Kohler line from Milwaukee over Lake Michigan to Muskegon, Michigan. These companies originated about 11% of the 1933 volume.[7]

The classification under "private express" includes that traffic hauled by an industrial firm for its own use. The amount hauled this way in the United States is negligible, although until 1932 Ford Motor Company operated such a line, partly to haul its supplies and partly as a proving ground for the planes it manufactured.[8] The United States army now carries some of its supplies in this manner. During 1933 no companies were operating their own planes or engaging solely in air express service. However, such a project was launched a few years ago and failed,[9] and another similar venture is starting this year.[10]

The trend is toward the two major systems handling an ever increasing proportion of air express. A serious lack of coordination obtains between these systems and when shipments are transferred from one to the other, a new waybill is required and the shipper must pay the full charges as if two separate shipments were made. Since

[5] I.C.C., Air Mail Docket No. 1.

[6] Computed from data in Burden, *op.cit.*, Table 16, p. 57.

[7] *Ibid.*, computed from Table 14, p. 55.

[8] Interview with R. W. Schroeder of Bureau of Air Commerce, formerly with the Ford Company, December, 1934.

[9] Air Express Company offering 17-hour transcontinental schedules, 1932.

[10] Columbia Air Express—Chicago, St. Louis, Nashville & Cincinnati—*Chicago Daily News*, January 11, 1935.

the air express business is divided between these two systems, there is hardly enough traffic to justify either system in operating its own fast pick-up and delivery service even in large cities. These and other defects will be dealt with later.

Statement of the Problem. As already stated, the volume of air express traffic is insignificant in almost any light one chooses to consider it. It is the stepchild of air transport; neglected partly because it is the less romantic part of the business, and partly because at the very time airline executives began to see the possibilities of this traffic they were occupied in a struggle for the very existence of commercial air transportation itself because of the cancellation of air mail contracts and the subsequent low mail pay rates which resulted in heavy operating losses. Little incentive was present for the airlines to commit themselves to expansion and experimental work with air express. Then too, many had at one time been too enthusiastic about air express prospects and, finding their hopes not so easy of fulfillment, had become very skeptical of the future of air express.

The purpose of this study is to arrive at some conclusions as to what policies can and should be followed in order that air express traffic may develop to the place it deserves in air transportation alongside the mail and passenger services. In this both the air transport companies and the public have an interest. To the companies, a carefully developed express traffic means more revenue, and to the public it means a new service having an economic function in the movement of high-value merchandise. An increased revenue for the airlines renders the much debated subsidy to the industry less necessary, and thereby lessens the burden on the taxpayer.

In working toward the main objective of this study consideration will be given to the question of subsidy, the best type of organization for the business, coordination, the rate structure, the flying of exclusive express or express-and-mail schedules, competition, and many other matters. The study will be organized under three major headings.[11] Part I will present an analysis of air express traffic including its volume, composition, direction of movement. Part II, after setting forth its competitive position with other forms of transport, will consist of an analysis of the cost of and demand for air express service. Part III will present proposals for rate structures and policies for development of the service.

Analysis of Present Air Express Traffic

1. Nature of Air Express Traffic

An analysis of over 19,000 waybills shows that most air express shipments weigh very little. The results of various counts are summarized in Table I in an effort to determine the distribution of shipments according to weight. Of those shipments over ¾ weighed five pounds or less and well over ⅛ were one pound or less. Only 10% of the shipments weighed more than 10 pounds and slightly less than ¼ were over five pounds.

The average weight of 137,692 shipments made in 1934 which are analyzed in Table II is 6.6 lbs., with a range from 6 lbs. for the Eastern Air Lines to 7.8 lbs. for the American Airlines.

While about 90% of the shipments

[11] The materials for this study were gathered principally from government records in Washington, D.C., the company records and statistics of airlines, letters and communications from and personal interviews with government officials and airline executives in Washington, D. C., New York City, and Chicago.

TABLE I. DISTRIBUTION OF SHIPMENTS ACCORDING TO WEIGHT

Size of Shipment	2,500 Shipments, R. E. A. August and September, 1933*	1,380 Shipments, Eastern Air Lines out of New York, October, 1934†	12,648 Shipments, R. E. A. April, 1934‡	2,500 Shipments, American Airlines September, 1934§	All Shipments, (19,040) Combined
Shipments 1 lb. or under	31.6%	40.5%	37.5%	34.0%	36.5%
Shipments over 1 lb. and not over 5 lbs.	45.5	34.5	40.4	37.3	40.4
Shipments over 5 lbs. and not over 10 lbs.	12.8	12.9	12.2	13.3	12.4
Shipments over 10 lbs.	10.1	12.1	9.9	15.4	10.7
Shipments 5 lbs. or under	77.1	75.0	77.9	71.6	77.2

* J. F. Scheetz, "Investigation of Air Express Possibilities" (unpublished manuscript), p. 48.
† G. A. E. Daily Reports.
‡ R. E. A., Interview with Mr. Gorby, Dec. 1934.
§ Taken directly from waybills.

weigh 10 lbs. or less, this does not mean that a substantial proportion of the tonnage is not derived from the other 10% of the shipments. Often one shipment of machine parts weighs as much as 100 shipments of photos. Thus, this 10% of the shipments contributes much more than a corresponding percentage of the total tonnage. In fact, an actual count of American Airline waybills for September, 1934 showed that 15% of the shipments weighed more than 10 lbs. and comprised 75% of all weight and 50% of all revenue.[12] The value of increasing these heavier shipments is readily apparent, for pick-up, delivery, and overhead costs of handling a heavier shipment are little or no more than for a light one.

TABLE II. AVERAGE WEIGHT AND REVENUE PER SHIPMENT, AND AVERAGE REVENUE PER POUND OF AIR EXPRESS TRAFFIC

Agency	Average Weight of Shipments (Lbs.)	Average Revenue per Shipment	Average Revenue per Pound (Cents)
American Airlines, 7 mos. of 1934* (21,434 shipments)	7.8	$ 2.90	.37½
Eastern Air Lines, 5 mos. of 1934* (9,713 shipments)	6.0	1.93	.32½
Railway Express Agency, 9 mos. 1934† (97,487 shipments)	6.4	3.12	.48
American Airlines*, Sept. 1934 (2,500 shipments)	6.08	2.59	.42
United Air Lines, samples from 6 mos., 1933‡ (6,558 shipments)	5.6	3.14	.55
All 137,692 shipments combined and weighted	6.6	2.97	.42

* Taken from Company records.
† R.E. A., Interview, J. S. Gorby, Dec., 1934.
‡ Scheetz, *op. cit.*, Table 9.

Small, too, is the average revenue derived from each shipment. Of the shipments made in 1934 (Table II) the average revenue per shipment varies from $1.93 for Eastern Air Lines to $3.12 for the Railway Express Agency. This variation is attributable principally to the greater or lesser average length of haul on the various lines rather than differences in nature of the cargo hauled. Combining all these shipments yields an average revenue per shipment of $2.97, or 42c per pound.

Relative Importance of Various Commodities According to Number of Shipments. Almost every kind of high-value merchandise is carried by air. Table III presents a list of 30 of the 340 items carried over American Airlines during a five-months' period in 1933, ranked according to their importance from the standpoint of number of shipments. The list was made up from the waybills for the period. The infrequency of the appearance of any

[12] A few shipments of from 100 to 200 lbs. increase the average weight of air express shipments so that although ¾ of the number are under 5 lbs., yet the average weight is above 6 lbs.

one item other than the first 30 listed below renders it relatively unimportant.

The bulk of air express traffic consists of a very few commodities. Table IV presents an analysis of shipments over American Airlines and Eastern Air Lines, which are associated together in the General Air Express system, and those over the 14 lines of the Railway Express system. The items are ranked according to number of shipments carried, and their relative importance is expressed as a percentage of the total number of shipments over each system and during the period indicated. The last column gives the average of the previous ones without weighting. It may readily be seen that seven commodities comprise approximately 80% of the shipments, and four items (valuable papers, advertising and printed matter, photos, and films) comprise roughly 70% of all shipments. Some 350 items included under the heading "miscellaneous" comprise only about 20% of the total number.

TABLE III. PRINCIPAL COMMODITIES CARRIED BY GENERAL AIR EXPRESS OVER AMERICAN AIRLINES, INC., JUNE-DECEMBER, 1933, INCLUSIVE, LISTED ACCORDING TO NUMBER OF SHIPMENTS HANDLED*

1. Photographs
2. Printed matter
3. Films
4. Automobile parts
5. Advertising
6. Electrotypes
7. Newspapers
8. Flowers
9. Checks—cancelled, blank
10. Clothing—shoes, hats, fur coats, dresses, suits, sweaters, wraps, blouses, leather jacket, pajamas, beachcoat, hose, top coat, tuxedo, bathing suit, buttons
11. Machinery and parts
12. Airplane parts
13. Radio and equipment
14. Securities
15. Artwork, paintings, sketches
16. Papers
17. Waybills
18. Proofs
19. Spinnerettes
20. Photo plates
21. Electric apparatus
22. Fittings—pipe, valves
23. Blue prints
24. Cotton samples
25. Advertising plates
26. Leather goods—calf finished, brief cases, suitcases, handbags
27. Dogs
28. Books, booklets, scrap books, pamphlets
29. Foodstuffs—spices, venison, figs, cake, walnuts, yeast, fish in ice, bread, honey, coffee samples, tea samples, flour samples, turkey, rabbits, ducks, corn chips, rice samples, shrimp, alligator pears, sausage casings
30. Records

* 340 different commodities were carried during this five months' period.

The commodities which show great variations as among the lines are valuable papers and photos. The Railway Express system carries a greater proportion of valuable papers than do the lines associated in the General Air Express system. A partial explanation for this may be that the lines comprising the former connect most directly the great metropolitan industrial and commercial centers, where traffic in valuable papers is much heavier; also, many feel the Railway Express system is somewhat more reliable and the chance of loss of this very valuable cargo is less. On the other hand, the American and Eastern Airlines associated with the General Air system carry a larger proportion of newsphotos, possibly because General Air Express pick-up and delivery service is somewhat faster.

Relative Importance of Commodities According to Weight. Another measure of relative importance of the various commodities is weight. Table V is made up similarly to Table IV but ranks the various commodities according to the weight of each carried by air express.[13]

A very few items also comprise the bulk of the weight. Seven commodities account for about ¾ the total weight, and four items contribute over ½. However, the ranking of the items is not exactly as it was in Table IV. Valuable

[13] The following analysis shows the relative importance of the various commodities (as to weight) carried

(*Footnote 13 continued on page 271*)

TABLE IV. RELATIVE IMPORTANCE OF VARIOUS COMMODITIES FROM STANDPOINT OF NUMBER OF SHIPMENTS EXPRESSED AS PERCENTAGE OF ALL SHIPMENTS

Item	American Airlines, September 1934*	R. E. A. April, 1934†	R. E. A., in and out of New York, 5 Months, 1934†	R. E. A., Samples 6 Months, 1933‡	Eastern Air Lines out of New York, October, 1934§	Unweighted Average of Lines Considered
1. Valuable papers	2.5%	28.3%	34.2%	40.0%	3.7%	21.7%
2. Advertising and printed matter	26.4	20.8	22.2	18.4	15.2	20.6
3. Photos (news)	26.5	14.3	.....	5.0	28.4	14.8
4. Films (and negatives)	11.2	4.6	16.6	7.3	11.3	10.2
5. Parts: plane, auto, machine, tools	7.0	6.5	.....	8.6	2.9	5.0
6. Newspapers	1.3	4.8	.....	5.7	10.6	4.5
7. Clothing and textiles	2.8	3.2	4.8	4.5	2.9	3.6
8. Miscellaneous	22.3	17.5	22.2	10.5	25.0	19.6

* Taken directly from waybills.
† J. S. Gorby, R.E.A., Interview, Dec. 1934. This sample covers 47½% of all R.E.A. business.
‡ Scheetz, *op. cit.*, Table 9.
§ G.A.E. Daily Reports on shipments out of Newark; includes 51% of shipments and 63% of tonnage of E.A.L. express traffic.

papers, which comprised about 22% of the total number of shipments, comprise only about 8% of the tonnage, and photos account for about 18% of the shipments, yet only a little over 3% of the tonnage. On the other hand, "parts" made up only 6% of the shipments while accounting for over 13% of the tonnage.

(*Footnote 13 continued from page 270*)

by the German air lines (Deutsche Lufthansa) during 1933:

	Percentage of Total Weight
Valuable papers and precious metals	1.8%
Printed and advertising matter	4.9
Parts	24.9
Clothing and textiles	21.7
Films, photos, and optical instruments	5.5
Newspapers	
Flowers	22.1
Miscellaneous	19.1
	100.0%

Significant is the large amount of cut flowers and clothing carried by this line. The proportion of total weight of American traffic which cut flowers contribute is insignificant, while on the German lines they account for 22% of the traffic. While clothing contributes on the average 2.8% on our lines, on the German lines it accounts for nearly 22%. Photos and films contribute 15% of the weight here and only 5% on the Deutsche Lufthansa. Advertising and printed matter account for 17% of the weight on the United States lines and only 5% on the Lufthansa. (The above table furnished by Mr. Burden, Letter, March 4, 1935.)

In the case of the Eastern Air Line's traffic, newspapers provided only 10% of the shipments, but 38% of the tonnage. This latter figure is very much out of line with the experience of other companies and may be explained by the fact that Eastern Air Lines had a contract with a New York newspaper to ship papers by air express daily. The contract was gained by placing a special rate on papers (in larger shipments) and from 70 to 215 pounds of newspapers of this company moved over Eastern's

TABLE V. RELATIVE IMPORTANCE OF VARIOUS COMMODITIES ACCORDING TO WEIGHT*
(Expressed as Percentage of Total Weight)

Item	American Airlines, September, 1934	Eastern Air Lines out of New York October, 1934	Railway Express Agency, July-December, 1933	Average
1. Advertising and printed matter	21.6%	9.2%	19.8%	16.9%
2. Newspapers	4.4	38.2	5.7	16.1
3. Parts: plane, auto, machine, tools	17.5	3.0	20.2	13.6
4. Films	14.5	11.7	10.5	12.2
5. Valuable papers	1.5	1.6	21.5	8.2
6. Photos (news)	5.0	3.8	1.6	3.5
7. Clothing and textiles	3.5	1.8	3.2	2.8
8. Misc.	32.0	30.7	17.5	26.7

* Sources: Same as for Table IV.

line daily (except Saturday and Sunday) during the period here considered.

Some 350 other commodities comprised about ⅛ the number of shipments and a little over ¼ the tonnage. Because of the infrequency of these latter items in the express traffic, one may well assume that their shipments are strictly of an emergency nature rather than "regular" traffic.

Relative Importance of Commodities according to Revenue. Probably more important to the airline executive than the relative importance of weight or number of shipments is the revenue received from the various items. Data on American Airline and Eastern Air Line revenue derived from the various commodities are presented in Table VI. The seven most important commodities contribute ⅔ of the revenue, while about 350 other commodities make up the balance.

TABLE VI. RELATIVE IMPORTANCE OF THE VARIOUS COMMODITIES FROM STANDPOINT OF REVENUE*
(Expressed as Percentage of Total Revenue)

Item	American Airlines, September 1934	Eastern Air Lines, out of New York October, 1934	Average Contribution to Total Revenue
1. Advertising and printed matter.	19.6%	8.3%	14.0%
2. Films and negatives.....	16.9	10.2	13.5
3. Photos.....	11.0	11.9	11.2
4. Parts: plane, auto, machine..	18.0	3.5	11.0
5. Newspapers....	2.0	18.2 (estimated)	10.1
6. Clothing.....	3.0	1.9	2.5
7. Valuable papers	1.7	1.5	1.6
8. Miscellaneous..	27.8	44.5	36.1

*Sources: Same as Table IV and V except there are no revenue data on Railway Express Agency system.

Four items contribute half the revenue. Photos show a somewhat larger proportion of total revenue (11.2%) than would be indicated if more comprehensive data were available. For the same reason valuable papers, contributing an average of 1.6% of revenue, should be credited with providing a larger proportion. Railway Express data would also raise the average proportion which "parts" contribute to the revenue.

Summary. Table VII summarizes the data on relative importance of various commodities by bringing together the averages in Tables IV, V, and VI with additional data on average weight and revenue of shipments. While photos and valuable papers comprise a large proportion of the number of shipments, they contribute a much smaller part of tonnage and revenue. They yield a relatively high revenue per pound, but because the traffic in these items is made up of a large number of light shipments the pick-up, delivery, and overhead costs are much higher per pound and it is likely that the *net* revenue per pound on these items is less than on other heavier commodities. The relative importance of films and negatives by all standards (number of shipments, weight, and revenue) is approximately the same (10 to 13% of total). Newspapers (4.4%) and "parts" (6.2%), while accounting for a small part of total shipments, contribute much more heavily to tonnage and revenue.

Table VIII presents a summary analysis of the traffic of General Air Express, carried partially or wholly over American Airlines in September, 1934. Several of the items which are grouped in Table VII are broken down in Table VIII. The items "advertising" and "printed matter" are listed separately and "advertising matter" is further broken down into "advertising matter," "electros," "blueprints," and "matrices." Films and negatives are listed separately. "Parts" is broken down into "auto and machine parts" and "plane parts."

TABLE VII. RELATIVE IMPORTANCE OF THE VARIOUS COMMODITIES*

Item	Percent of Total Number of Shipments (1)	Percent of Total Weight (2)	Percent of Total Revenue (3)	Average Weight (Lbs.) (4)	Average Revenue per Shipment (5)	Average Revenue per Pound§ (6)
1. Valuable papers	21.7%	8.2%	1.6%†	3.2	$1.64	$ .52
2. Advertising and printed matter	20.6	16.9	14.0	5.1	1.68	.33
3. Newsphotos	14.8	3.5	11.2‡	1.2	1.09	.90
4. Films and negatives	10.2	12.2	13.5	7.7	3.14	.41
5. Parts: auto, plane, machine, tools	5.0	13.6	11.0	11.5	4.71	.41
6. Newspapers	4.5	16.1	10.1	17.5	4.18	.24
7. Clothing and textiles	3.6	2.8	2.5	5.3	2.44	.46
8. Miscellaneous	19.6	26.7	36.1	8.8	4.25	.48

* Sources: First 5 columns same as Table IV.
† Slightly low estimate because of lack of R.E.A. data on revenue.
‡ Slightly high estimate because of lack of R.E.A. data on revenue.
§ Column 5 divided by column 4.

From the evidence here presented one may conclude that the vast majority of air express shipments are *emergency* shipments. Those shippers using air express regularly[14] do so only because the commodity they ship has relatively high value and rather small bulk, such as valuable papers, or because speed is by far the most essential consideration in the transportation of that commodity. Examples of the latter are newspapers, newsphotos, and some films. Shipments of heavy auto or machine parts by air express would be done only in an emergency.

[14] Burden (*op. cit.*) estimates that 75% of all shipments are "emergency" shipments and 25% are "regular."

TABLE VIII. ANALYSIS OF THE ITEMS CARRIED BY GENERAL AIR EXPRESS WHOLLY OR PARTIALLY OVER AMERICAN AIRLINES IN SEPTEMBER, 1934, AS SHOWN BY WAYBILLS

Item*	Shipments			Weight				Revenue			
	Number of Shipments	Percent of Total Shipments	Rank	Total Weight (Lbs.)	Percent in Weight to All Express Traffic	Rank	Average Weight per Shipment (Lbs.)	Total Revenue	Percent in Revenue to All Express	Rank	Average Revenue per Shipment
Total	2,502	100.0%	.....	15,230	100.0%	.....	6.1	$6,486.44	100.0%	.....	$2.59
1. Films	232	9.2	2	2,152.5	14.1	2	9.7	1,030.44	15.9	1	4.44
2. Machine and auto parts	157	6.2	6	2,291.4	15.2	1	14.6	980.37	15.2	2	6.24
3. Photos	662	27.0	1	762.7	5.0	6	1.1	702.73	10.8	3	1.07
4. Unknown items†	225	8.9	3	1,618.0	10.6	3	7.2	572.07	8.8	4	2.55
5. Electros	175	8.0	5	1,034.7	6.8	4	5.9	410.65	6.3	5	2.35
6. Printed matter	204	8.4	4	834.2	5.4	5	4.1	320.44	4.9	6	1.57
7. Clothing	70	2.0	8	529.5	3.4	8	7.5	215.87	3.3	7	3.08
8. Advertising matter	77	3.0	7	332.0	2.1	10	4.3	199.06	3.1	8	2.59
9. Airplane parts	20	1.0	16	299.0	1.9	12	15.0	189.75	2.9	9	9.49
10. Matrices	67	2.5	9	279.5	1.8	14	4.1	142.16	2.2	10	2.12
11. Newspapers	33	1.2	13	677.0	4.4	7	21.1	127.31	2.0	11	3.86
12. Plates	66	2.5	10	310.5	2.0	11	4.7	112.72	1.7	12	1.71
13. Valuable papers	63	2.5	11	230.2	1.5	16	3.6	111.48	1.7	13	1.77
14. Guns	4	.0	72	197.0	1.2	18	49.2	110.65	1.7	14	22.13
15. Flowers	32	1.3	14	246.2	1.6	15	7.7	100.94	1.6	15	3.15
16. Blue prints	22	.8	15	417.0	2.7	9	2.0	89.95	1.4	16	4.09
17. Electric goods and parts	8	.0	54	111.7	.7	21	14.0	57.40	.9	17	5.22
18. Negatives	49	2.0	12	69.5	.4	28	1.4	56.61	.9	18	1.15
19. Radio and parts	9	.4	52	123.0	.8	20	13.6	55.55	.8	19	5.55
20. Steel	2	.1	94	284.7	1.8	13	142.3	35.13	.5	20	17.56
21. All others‡	325	13.0	.....	2,529.0	16.6	.....	7.7	865.16	13.4	.....	2.66

* Items arranged in order of importance according to revenue.
† "Unknown Items"—where shipper has not specified the nature of the shipment on the waybill, using such terms as "merchandise," "box," "envelope," or "material".
‡ Includes 120 odd items (except the 20 listed here).

2. *Characteristics of Traffic Movement*

Direction of Movement in Terms of Volume of Traffic. The nature of air express traffic has been analyzed. The task now is to determine where this traffic originates and where it goes. To facilitate this analysis the country has been divided into several territories or districts, as indicated on Map I, together with names and numbers by which these districts are designated.

The next problem is to discover how much traffic originates in each district and how much is received into each. Although complete data are not available, the volume of traffic forwarded and received by each city on two of the three major transcontinental air lines was obtained. These were then consolidated to find the amount of traffic shipped from and to each territory. From these data the percentage of total traffic handled in each district was calculated. The period taken covers six months of 1934 over both lines, and the statistics include over 85,000 shipments totalling almost 600,000 lbs. of express. This tonnage is nearly as much as all domestic traffic over a similar period in 1933. These lines cover the country well enough to be representative of all air express traffic, except possibly in the extreme Southeast.

The percentage of traffic originated and received by each of these districts is presented in Table IX. It will be noted that a little over ⅓ of the traffic is *shipped out* of the New York district, which in turn *receives* nearly ⅓ of the country's express traffic. The territory east of the Mississippi and north of the southern boundary of Kentucky originates about 70% of the total air express traffic and receives about 60% of it. The Pacific Coast districts contribute about ¼ the total traffic and receive slightly more.

The vast territory from the Mississippi to, but not including, the Pacific Coast states contributes only 3.9% of the

TABLE IX. AIR EXPRESS TRAFFIC ORIGINATED AND RECEIVED IN THE VARIOUS PARTS OF THE UNITED STATES*

(Measured by Percentage of Total Number of Shipments, Tonnage, and Revenue over a Period of Six Months of 1934)

District	Shipments Originated			Shipments Received		
	Number	Weight	Revenue	Number	Weight	Revenue
1. New York	33.5%	35.0%	36.1%	31.0%	30.5%	39.5%
2. Cleveland	14.9	14.6	13.0	11.5	11.9	9.5
3. Chicago	21.0	20.0	20.0	19.4	19.4	17.6
4. Atlanta	.2	.3	.2	.6	.7	.6
5. Kansas City	3.0	2.7	2.7	5.3	5.4	4.4
6. Salt Lake City	.9	.8	.7	3.3	3.3	3.2
7. San Francisco	11.6	12.2	11.2	12.3	11.6	12.6
8. Los Angeles	11.4	10.8	13.2	10.1	9.8	14.3
9. Seattle	3.2	3.1	2.9	6.7	6.4	7.7

* Compiled from data gathered from the various company express records.
Weight and revenue data on shipments received were calculated by multiplying the number of shipments by average weight and revenue per shipment.

TABLE X. PERCENTAGE OF THE TONNAGE OF EACH MAJOR TERRITORY WHICH IS SHIPPED TO EACH OF THE OTHER DISTRICTS*

TO	FROM				
	1 New York District	3 Chicago District	7 San Francisco District	8 Los Angeles District	9 Seattle District
1. New York District	.....	51.0%	9.8%	32.7%	13.7%
2. Cleveland District	7.9%	4.9	.7	5.3	2.1
3. Chicago District	44.9	.1	5.9	11.0	1.4
4. Atlanta District†	.....	.....	.....	.....	.....
5. Kansas City District	14.2	24.5	1.2	2.2	.8
6. Salt Lake City District	2.8	6.6	11.5	7.0	8.7
7. San Francisco District	8.6	4.6	8.6	27.6	29.7
8. Los Angeles District	13.6	4.5	27.7	4.6	18.9
9. Seattle District	8.0	3.8	34.6	10.2	24.7

* Scheetz, *op. cit.*, Table 1, p. 5. Based on six months' period 1933.
† Mr. Scheetz's data did not cover this territory.

traffic, but receives 8.6%. The Salt Lake City district, which covers over seven states, contributes less than 1% of the air express traffic, receiving 3.3%. A rough estimate shows that 15 states contribute 95% of the total traffic and receive 88%. In the New York, Cleveland, Chicago, and Los Angeles districts more air express is shipped out than is shipped into them, while the San Francisco, Seattle, Salt Lake, Kansas City, and Atlanta districts receive more than is shipped from them. Almost four times as much air express tonnage is shipped into the Salt Lake territory as is originated in that district.

While very little express traffic is contributed by the western states from the Mississippi River to but not including the Pacific Coast states, yet much of the traffic must pass over this territory. For example, over 30% of the traffic out of the New York district and 13% from the Chicago district has its destination on the Pacific Coast, hence passes over these western states. Similarly nearly ⅛ of the shipments from the Pacific Coast goes to the New York territory and 11% to the Chicago district.[15]

Tables X and XI show the flow of traffic among the various territories. In

[15] Scheetz, *op. cit.*, Table 1, p. 5.

TABLE XI. PERCENTAGE OF TONNAGE OF EACH DISTRICT WHICH IS SHIPPED TO EACH OF THE MAJOR TERRITORIES*

FROM	TO				
	1 New York District	3 Chicago District	7 San Francisco District	8 Los Angeles District	9 Seattle District
1. New York District	.....	69.1%	19.5%	34.0%	21.3%
2. Cleveland District	6.5%	9.2	4.1	3.7	1.0
3. Chicago District	64.1	.2	13.2	14.4	12.7
4. Atlanta District†	.....	.....	.....	.....	.....
5. Kansas City District	9.6	9.2	15.4	.2	1.0
6. Salt Lake City District	1.1	1.3	6.0	1.0	.....
7. San Francisco District	4.8	4.5	9.6	34.0	44.9
8. Los Angeles District	12.0	6.2	22.7	4.3	10.0
9. Seattle District	1.9	.3	9.5	6.6	9.1

* Scheetz, *op. cit.*, Table 2, p. 6. Based on six months' period 1933.
† Mr. Scheetz's data did not cover this territory.

Table X is shown what part of the traffic of the major territories goes to each of the other districts. Table XI shows what part of the traffic of each district goes to each of the major districts.[16]

Direction of Movement in Terms of Types of Traffic. The type of commodities shipped into the industrial Northeast does not differ as much from that shipped out of those territories as one might expect. This can possibly be explained by the fact that the volume of the traffic is limited to so few commodities, and mainly to shipments of an emergency nature. With an increase in so-called "regular" traffic one may expect this difference in type of traffic gradually to increase. For instance, a great part of the volume of shipments to the North and East may be expected to be in perishable products, while industrial products will move South and West.

However, many more shipments of valuable papers are received into Chicago and New York areas than are shipped out.[17] In fact, only 6% of the volume of traffic from New York City to San Francisco is in valuable papers, while nearly 34% of the traffic from San Francisco to New York is in valuable papers. Also, clothing comprises 10% of the volume from New York to San Francisco and only 1% of the traffic in the opposite direction.[18] Table XII presents the relative importance of each of the principal commodities in the total volume between New York and San Francisco.

Advertising and printed matter rank high (37%) in shipments west to San Francisco, and are less than ⅛ of the volume east to New York. Films comprise ⅓ of the tonnage from San Francisco to New York and less than 6% in the opposite direction. The total volume of traffic westward is considerably greater than that going east.

TABLE XII. RELATIVE IMPORTANCE OF THE VARIOUS COMMODITIES IN THE TRAFFIC BETWEEN NEW YORK CITY AND SAN FRANCISCO*
(Expressed as Percentage of Total Weight)

Commodity	New York to San Francisco	San Francisco to New York
1. Valuable papers...	6.0%	33.6%
2. Advertising and printed matter....	37.4	8.8
3. Parts.....	5.1	2.1
4. Clothing.....	10.1	1.2
5. Films.....	5.7	33.9
6. Newspapers.....	2.2	1.6
7. Newsphotos.....	10.0	2.5
8. Miscellaneous	23.5	16.3
Average pounds per month.....	771 lbs.	431 lbs.

* Scheetz, *op. cit.*, Table A of Appendix; based on six months' period 1933.

Time of Movement. An investigation as to the time of day the traffic moves proves interesting. In analyzing the time of movement the traffic data of the Eastern Air Lines out of Newark, New Jersey (the New York airport) for October, 1934, and the United Air Line traffic data from all ports during December, 1934 were available. The Eastern Air Line traffic out of Newark, however, included 51% of the shipments, and 63% of the weight of traffic from all Eastern Air Line ports during that month, so the data should be representative.

Table XIII shows the distribution of traffic among the various schedules of United Air Lines between New York and Chicago. The data for those calculations were taken from United Air Line daily traffic reports. The number of daily shipments was calculated by dividing the weight by the average weight of shipments over the Railway Express Agency system during the first nine months of 1934. Daily revenue

[16] *Ibid.*, Tables 1 and 2, pp. 5 and 6.
[17] *Ibid.*, pp. 5 and 6, Tables 1 and 2.
[18] *Ibid.*, Table A, Appendix.

was calculated by multiplying the weight by the average charge per pound over the same system and for the same period of time. The plane loads indicated include shipments picked up at intermediate stops along the way.

TABLE XIII. TRAFFIC HAULED ON THE VARIOUS SCHEDULES OF THE UNITED AIR LINES BETWEEN CHICAGO AND NEW YORK CITY, DECEMBER 1-29, 1934*

Time of Departure	Percent of the Month's Tonnage‡	Average Daily Load‡		Average Daily Revenue†
		Number of Shipments†	Weight (lbs.)	
8:30 A. M. East	3.0%	7.5	48	$23.00
9:00 A. M. West	5.5	13.8	88	43.00
10:30 A. M. West	2.1	5.5	35	17.00
11:30 A. M. East	2.9	7.2	46	22.00
12:00 M. West	2.8	7.0	45	21.50
2:00 P. M. East	2.0	5.5	35	17.00
3:30 P. M. East	1.4	3.5	22	11.00
4:00 P. M. West	8.6	22.0	139	66.00
4:30 P. M. East	7.4	19.0	122	58.50
7:00 P. M. West	9.5	24.0	150	72.00
9:00 P. M. West	15.2	38.0	245	118.00
9:30 P. M. East	15.0	37.5	240	115.00
11:00 P. M. West	15.0	37.5	240	114.50
1:30 A. M. East	9.6	24.0	154	74.00
Totals	100.0%	252.0	1,709	$774.50

* Compiled from United Air Lines daily express reports.
† Number of shipments estimated by dividing weight by average weight of R. E. A. shipments, first 9 months, 1934. Revenue estimated by multiplying weight by average charge per pound.
‡ Includes traffic picked up at intermediate stops.

Most of the express traffic of the United Air Lines is carried at night. Both between Chicago and New York and between San Francisco and Los Angeles approximately 80% is hauled on planes leaving in the late afternoon and night, from 6 to 8% in the afternoon, and about 13% in the forenoon. Examination of the data for traffic between San Francisco and Chicago shows over 80% hauled at night. The traffic between Seattle and Salt Lake City shows very similar percentages. These routes (along with that of Eastern Air Lines) include an Atlantic coast route, a Pacific coast route, and a Transcontinental route. Thus these conclusions can be considered representative of all air express traffic, and certainly would be significant in planning exclusive express schedules over the trunk lines. All such schedules should insure early morning deliveries and should depart late in the day. On the routes between Chicago and New York and between Los Angeles and San Francisco the plane express loads are much heavier than those on the Eastern Air Lines. For instance, on the New York-Chicago trip the evening schedules carry an average of about 38 shipments (240 lbs.) on each plane; average revenue per trip is about $115.

The Eastern Air Lines data show a very similar distribution of traffic in respect to time of departure; 91% of all traffic was carried on the four evening schedules between 4:40 and 10:50 P.M. Sunday shipments were very few. During the month 3½% of all tonnage was trained because of bad weather or some other reason.

An examination of monthly express statistics shows no great seasonal variation of air express traffic.

The next instalment, after presenting a comparison of air express rates with rates of potentially competitive services, will analyze the cost of and demand for air express service. Several proposed methods of handling the traffic will be discussed with a view to ascertaining comparative costs and determining the most economical methods. An effort will then be made to discover whether or not rates based on these costs will attract sufficient volume to develop the service to any great extent, thereby benefiting both the public and the airline. In the third and last instalment certain proposals will be made as to what policies should be followed if the business is to develop its full potentialities.

I. The French Attack on the Housing Problem

By WELLS BENNETT*

Introduction

IN the past the American has enjoyed the conspicuous privilege of making his home and his place in the sun by individual effort. Even now that we have become industrialized and urbanized the notion that a decent home is the "right" of the citizen of a well governed nation, and that the provision of such facilities for those who are without them may properly constitute a public utility is strange doctrine to us. Abroad, this principle has long been debated both in theory and in practical politics until now the housing problem is "recognized" in most European national economies.

The public housing activities of post-War England and Germany stand first in performance and have been thoroughly scrutinized by students of the problem. These countries, each with 2,000,000 houses to its credit since the War, not only surpass all others in volume of units produced, but must also command respect for the comprehensive character of their programs. Beyond the actual housing accomplished such pioneers in nation-wide action are important because they present seasoned programs and, in some degree, have developed distinct housing policies. Their work may have been experimental but only by trial and error has the measure of their successes and failures been made apparent, and supplied a basis for further action. To the experience of the veterans in housing France now adds her own chapter.

The economic setting which has created the problem, the response of public opinion in terms of remedial legislation, and the patterns of housing technique which have gradually evolved are, in France as elsewhere, the essence of the national effort. While many characteristics of the general problem are evident here, certain details are attacked with methods peculiarly French. The particular section of French housing analyzed in this study is that of the housing authority of the metropolitan region of Paris as contained within the Department of the Seine. In this district the housing problem has been especially acute and here is being built the significant French work.

The existence of several housing authorities in this region, two of them of great importance, is somewhat confusing. Although the City of Paris occupies perhaps an eighth of the Department of the Seine and completely dominates its life, many Departmental activities are distinct from those of the City. This is the case in housing organization. The City of Paris directs the construction and maintenance of its housing enterprises from its Office Public d'Habitations a Bon Marche in an old building adapted for the purpose at 42 Rue Cardinal Lemoine not far from the Sorbonne, while a similar office for the Department of the Seine is established in its own ultra-modern building at 32 Quai de Celestins, near the Hotel de

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The author wishes to acknowledge the generous assistance of M. Henri Sellier, Administrator of the Office Public d' Habitations of the Department of the Seine, and of Madame A. Bonnaud, his assistant in charge of documents and public relations.

Professor Jean Hebrard of the University of Michigan, formerly architect for the settlement at Gennevilliers, has made many helpful suggestions.

Ville. Not only are these offices distinct administrative entities but their policies and achievements are as markedly different as the architecture of their respective headquarters. Such a difference is quite natural with conditions inherent in urban land congestion and the devious ways of city politics on the one hand, and aggressive reform leadership on the other. Projects in the City are compact five- to seven-story walk-ups or, in the better class, elevator apartments, all essentially collective dwellings. The Department, being partly urban, partly open land, offers both garden-city and urban types of plan in various combinations. Fifteen self-contained projects, varying in size from 150 to 5,000 dwellings, present a consistent general-plan development, yet answer the problem with a considerable variety of solutions.

The so-called "Red Belt" of these suburbs of outer Paris has brought heavy political pressure for housing action by large-scale operations, thus pushing forward the Department authority; and readily available tracts of land have made open planning more feasible. But the outstanding force toward constructive action has been the vigorous leadership of the Departmental housing administration headed by M. Henri Sellier.

As will be seen, public aid in housing has not been wholly through public offices. Employer's housing has had a part and a national home loan system has been in operation for 25 years. Charitable, cooperative, and other limited-dividend groups have all done notable work. Their efforts, however, have been scattered and the projects realized do not show the broad regional planning or the progressive evolution of policy and design achieved by the Public Office of the Department of the Seine.

Following an outline discussion of the legislative background of French housing, the accomplishment of the housing authority of the Department of the Seine will be presented as a demonstration of the current national program. General policies and methods of housing management will be described, and a survey of physical characteristics will summarize the results to date. Several variations in the pattern of housing practice indicate the individualism of the French planner, which has produced some interesting and promising experiments in type plan and in construction. Finally, a discussion of costs and rents will permit a view of the economic factors in the French effort.

The Local Scene

With Paris as with other historic cities, congestion has accompanied uncontrolled growth. When, under the Second Empire, Haussmann's grand avenues made Paris the "City of Light," the housing of the poor was little improved. To be sure, many wretched quarters were in part destroyed but the new and palatial structures lining the avenues failed to provide for the lower income classes displaced by the building process. Then too, the avenues stopped abruptly at the city gates and outside these toll barriers, though within the urban area, were the continually expanding and wholly unplanned fringes of the City. With the general era of industrial expansion a movement to the suburbs began and between 1861 and 1896, while Paris had a 50% increase in population, the rest of the Department of the Seine gained 200%. In the period between 1896 and 1911 the increase within the suburban area averaged 30,000 persons per year.[1] This unre-

[1] Sellier, Henri, *La Crise du Logement* (Paris: Service des Etudes et Publications Sociales, 1921), p. 19.

strained growth naturally gave free scope to the speculator. The lack of planned roads and transportation and in some degree the gregarious habits of the Parisian working class have made for compact, not to say crowded, suburban development near the City and around outlying industrial plants. As in Paris itself, five- to seven-story flats in compact blocks are the dwelling type in these suburbs. Single or row cottages are quite exceptional.[2]

The problems created by this outer congestion have long been serious. Charts prepared from the Annual Statistics of the City of Paris and the 1911 Census[3] show, as would be expected, that the density of population is much greater in the city proper, only 6 out of 77 suburban communes having as great a density as the City's least populous arrondissements. Mortality charts, however, indicate that suburban living conditions are markedly inferior to those of the City. A survey in 1918 revealed 23 suburban communes as overcrowded (in terms of persons per room) as the four worst arrondissements of Paris, while but 5 communes made as good a showing as the 3 best arrondissements. Apparently, lack of plan and regulation, in conjunction with French individualism, has encouraged suburban growth in spots of serious congestion rather than by the more orderly horizontal development characteristic of Greater London and Berlin.[4]

Legislative Background

In 1913 a commission was appointed for "The Extension of Paris."[5] Exhaustive reports were prepared but with the coming of the War all practical activities were necessarily postponed. After the armistice the housing shortage and the absence of a plan for Greater Paris were recognized as related problems and such statesmen as Siegfried, Sellier, and Cornudet worked tirelessly for the cause. In 1919 the Law Cornudet legalized regional planning.[6] This law was faulty in that the communes were authorized to make their individual city plans—a likely source of confusion, since these political units outside the walls directly adjoin in irregular outlines like the pieces of a picture puzzle, are in some cases solidly built up, and are without natural boundaries such as waterways or accidents of land conformation. Rivalries between communes threatened to thwart the whole effort until an amendment a few months later set up a Bureau of Research for a "Greater Paris." Most of the communes agreed to conform to a general plan and an architectural competition for a scheme was held and judged in 1920. The Bureau, however, has only advisory powers. Various requirements may delay any communal project for as long as five years, and approval may finally be denied. Since the law passed in 1920 a dozen communes out of 77 have gained final approval of their projects as of public utility.

In a further attempt to control land use, transportation, and housing congestion Parliament in 1929 enacted the Law Tardieu.[7] By this Act a High Council of Organization of the Parisian

[2] Comparing Greater London with Paris and the Department of the Seine, both as of 1911, Sellier shows that these metropolitan districts had, respectively, 36 and 92 inhabitants per hectare.

[3] Sellier, *op. cit.*, opposite p. 104.

[4] Adams, Thomas, *Recent Advances in Town Planning* (New York: Macmillan Co., 1932), pp. 116, 237-238, and 282.

[5] A well documented account of this movement is given by M. Henri Descamps in a series of articles, "L' Amenagement de la Region Parisienne," 45 *La Construction Moderne*, December 22, 1929, pp. 174-8; January 26, 1930, pp. 257-64; and March 16, 1930, pp. 368-71.

[6] *Ibid.*, p. 176.

[7] *Ibid.*, p. 370.

Region was set up, including in its five sections: general planning, legislation, financing, public services, and housing. Its jurisdiction is not confined to the immediate circle of Paris but includes four Departments coming naturally into the metropolitan region. The first activities have been to study a general plan emphasizing transportation, to endeavor to coordinate the plans of the communes as set up by the law of 1920, and to exercise a certain zoning control. M. Sellier, placed in charge of the housing section, promptly set up a policy whereby housing projects would be placed so as to further the general plan. The Law Tardieu marks a milestone in the progress of French regional planning. The fact that the High Commission has a membership of about 200 yet no responsible chief executive officer leaves a centralization and clarification of powers greatly to be desired.

The crisis in actual housing facilities has arisen from the chaotic urban expansion that forced public opinion to the acceptance of a regional plan, but housing has had its own fight for public endorsement and its own history of legislation.

In France public concern with housing may be said to date from the Law Siegfried of 1894[8] which permitted savings banks and certain charitable organizations to make restricted loans.

The Law Ribot of 1908 setting up Societes de Credit Immobilier (loan associations for granting loans to individuals who sought to build or buy small homes) was the first important housing law.[9] For these loans the State advanced funds at 2% interest, making good the difference between the rate of interest asked and that at which the State might borrow money. This form of aid has continued to be a factor in French housing activity. There are over 300 of these societies and the loans to 1933 totaled over four billion francs.[10]

The Acts that have been named sought to promote housing betterment through loans and subsidies to private enterprise but the Housing Law of 1912 marked a forward step in public intervention. It permitted the setting up of "offices publics d'habitations a bon marche," or local authorities, as corporations through which the communes and departments could carry out housing projects.[11] The special beneficiaries under this law were to be poor families with several children, a social group whose need was great and whose value to the nation could be stressed. Money was to be loaned from certain public funds but rents were to be such as would maintain and amortize each project. Under this act the Public Office for the Department of the Seine was created by a Parliamentary decree of July 18, 1915 and the right of expropriation was established by another decree declaring a garden-city project in the Department to be a public utility.[12] Later laws have made this right secure and have detailed its application.

Building activity under the law of 1912 was soon cut short by the War. Not only were funds, labor, and manufacturing directed toward the supplying of soldiers and munitions but increasing construction costs raised rents and put new projects out of reach of those for whom the legislation was intended. With peace and the return to normal life the

[8] Barde, Pierre, *Les Communes et la Question de L'Habitation* (Paris : Recueil Sirey, 1932), p. 7.

[9] The maximum total investment per dwelling was set at 20,000 francs.

[10] *Rapport*, Conseil Superieur des Habitations a Bon Marche, 1933, p. 743. This report will be referred to subsequently as "*Rapport*, Conseil Superieur."

[11] Barde, *op. cit.*, pp. 8-9.

[12] Sellier, *op. cit.*, p. 218.

gravity of the housing shortage became one of the pressing problems in France, as in England, Germany, and elsewhere. It was particularly complicated in France by the prior claim of the devastated regions to whose restoration patriotism and the natural instincts of a nation of property owners gave first sympathy. So three-quarters of a million houses were reconstructed in the war area at a cost of ten billion francs.[13] In the meantime, the housing question became so acute in Paris that a law of 1920 authorized and helped finance two stopgap activities. The first of these was the purchase by the City of Paris and the Department of the Seine of several housing projects that had been undertaken by private enterprise or authorized housing societies and had been stopped in various stages of construction by the War and attendant financial difficulties. In the early 1920's four of these groups totaling 1,100 dwellings were completed by collaboration of the City and the Department, and some 18 groups comprising 300 dwellings were finished by the Department of the Seine.[14]

A second post-War enterprise was the construction of "semi-provisory" dwellings of light construction in the hope of securing emergency housing facilities cheaply and quickly.[15] Colonies of these small cottages built at Dugny and Bagnolet provided some 300 homes.

Housing construction went forward very slowly in the early post-War period. Increased building costs and higher carrying charges made it impossible for the commercial builder to provide new housing for the working classes and even the authorized loans at low rates and exemption from certain taxes failed to span the gap between construction costs and rents possible to those in the lower rent groups. Private enterprise gradually abandoned the field, for only cities, departments, or communes, subsidizing their own projects in addition to state loans, could make headway in providing new housing facilities. The problem became steadily more acute. Not only did working class opinion regard its needs as rights, but youth returning from the War demanded an improved standard of living. Young couples who had once submitted to being crowded with their elders into one small dwelling, or even into one room, now rebelled.[16] Compared with England or Vienna, change was slow in France but in 1928 effort and agitation culminated in the Law Loucheur, the fundamental document of the current housing program.

In forms of intervention the Law Loucheur[17] presents little that is new. Various local authorities and societies for collective housing and for home loans are continued from the earlier laws which had been codified in 1922. Government funds are to be loaned at 2% interest and these loans, to be amortized over a 40-year period, may amount to as high as 90% of the cost of the project, including land. As before, certain taxes are remitted. Construction of dwellings for large families is encouraged by a direct grant from the State up to ⅓ of the cost. The Law Loucheur does set forth two features of special

[13] Rey, A. Augustin, "Les Consequences Financieres de la Legislation sur les Habitations a Bon Marche," an address published in 101 *Journal des Economistes* 169 (February 15, 1932).

[14] Sellier, *op. cit.*, pp. 591-593 and 815-831.

[15] *Ibid.*, pp. 596-882.

[16] Sellier, Henri, "L'Effort Francais pour l'Habitation Populaire" in *L'Illustration*, No. 4491 (March 30, 1929), pp. 5-6.

[17] The text of the Law Loucheur may be found in F. L. Le Clerc and Guillemot Saint-Vinebault, *Traite Practique des Habitations a Bon Marche* (Paris: La Construction Moderne, 1929), or in 2 *L'Economiste Francais* 135-8 (August 4, 1928) and August 11, 1928, pp. 168-170.

importance. First, it is an emergency act with a definite program of construction. Over a period of five years 260,000 dwellings were to be built at an estimated cost of $480,000,000. Second, the State intervened to provide housing facilities for those somewhat above the low wage group by establishing the "medium rent" dwelling. These were to be built in the proportion of 60,000 units to 200,000 of the lower rent type. It was specified that the cost of a "moderate rent" dwelling was not to exceed that of the others by more than 75%, nor to rent for more than 3.6 times the low-cost rents. State loans for this improved type of dwelling might not exceed 40% of the cost, and the rate of interest was raised to 4%.

The "moderate rent" dwelling may have been intended to placate a stable section of the lower middle class but there was also a practical thought in the inclusion of a group more dependable as to rent payments and more peaceable as to social habits. The French blend of individualism and tolerance takes little offense at the mixture of classes in one residence district, if only family identity is kept intact. It has thus been possible to include the two rent types in the same project or even in the same dwelling block.

The Law Loucheur excludes private enterprise and in practice appears to favor departmental and communal public offices as being more responsible agents and as operating on a scale large enough to build effectively toward the completion of the program within the time set by the Act.

In actual practice the financial aid open to those constructing moderate-rent dwellings was not sufficiently tempting and the results were a disappointment to the men who had put forward this innovation.[18] In 1930 the Law Bonnevay, an amendment to the Law Loucheur, increased possible state aid to moderate-rent projects to 70% and, in addition, authorized a third type of dwelling intermediate between the low-cost and moderate-rent types. These "improved low-cost" dwellings obtain the same state aid as the cheaper type, except that the interest rate is 3 instead of 2%. Such dwellings have a corresponding standard of dwelling space and may rent at rates not to exceed twice those of the lower scale (See Tables IV and V below). [19] The institution of this type was an immediate success. The next year there were applications for over $35,000,000 in loans for improved low-cost dwellings where the budget had allowed but $16,000,000 in credits,[20] and this demand has continued.

Housing Accomplishment in the Department of the Seine

Descriptive Summary. The beginning of large-scale housing construction in the Department of the Seine may be said to date from the construction of 634 dwellings during the War. These were built directly by the Department, a practice thereafter abandoned in favor of its housing authority, the Office Public.[21] In 1916 the General Council of the Department voted a fund of $400,000 for the purchase of lands suitable for suburban projects[22] and late in 1918, as has been said, a decree

[18] *Rapport*, Conseil Superieur, 1928 and 1929, p. 827.

[19] Details of the Law Bonnevay are explained in Barde, *op. cit.*, pp. 60-65 and 102-104. All tables will appear in the second instalment of this article, along with their detailed analysis.

[20] *Rapport*, Conseil Superieur, 1930, p. 29.

[21] "Les Realisations Actuelles en Matiere d'H.B.M. dans le Departement de la Seine," in 45 *La Construction Moderne* 266 (February 2, 1930).

[22] Sellier, *op. cit.*, p. 597.

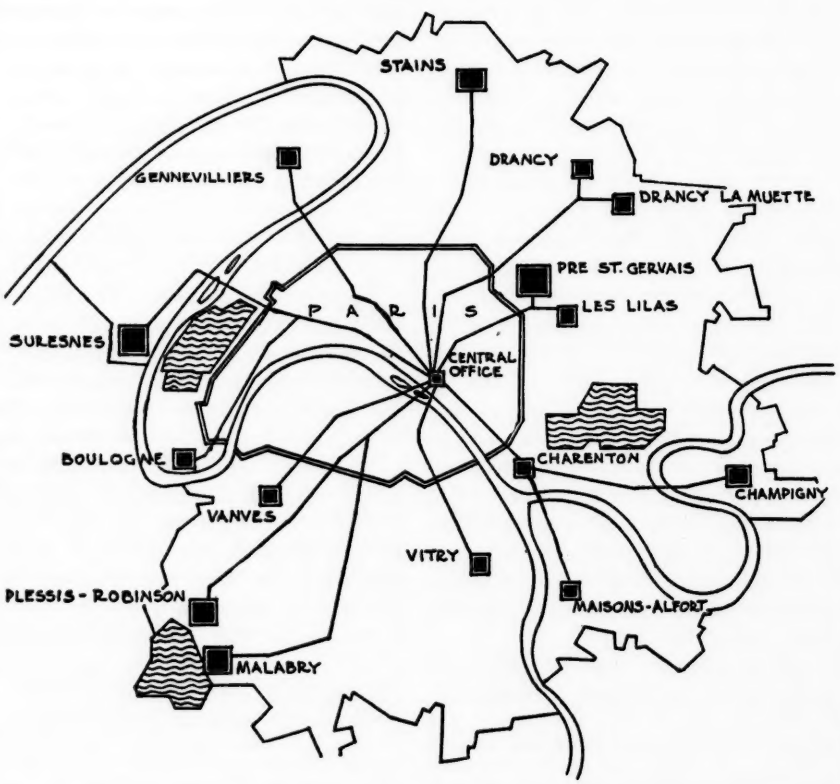
permitted expropriation. The site of the proposed garden city of Plessis-Robinson was at this time established as of public utility. During this period projects were being planned and after the armistice construction slowly got under way. When the Law Loucheur was enacted the Department Public Office had already acquired in its various sites 1,000 acres of land and was ready for immediate action.[23] The last five years have seen the realization of a major part of its program of 23,000 dwellings.

The sites of the Departmental projects are geographically well distributed about Paris (Plate I). Locations varied as to terrain and housing needs have set special planning problems. Plessis-Robinson and Malabry are in beautiful open country with some wooded area. Boulogne and Charenton, on opposite sides of Paris and both on the Seine, are on very restricted sites with large factories and docks nearby. Drancy is on a flat site without trees in a district

[23] *Rapport*, Conseil Superieur, 1928-29, p. 813.

PLATE I

KEY MAP TO HOUSING PROJECTS IN THE DEPARTMENT OF THE SEINE



of scattered and squalid settlements. The availability of land at reasonable prices and proximity to sources of employment have been practical governing factors, but in selecting locations M. Sellier has endeavored to identify these projects with the tentative regional plan of Greater Paris already mentioned.

The material accomplishment in the Department of the Seine has been very favorably affected by the policy of the Office in relation to architectural design. For the first studies directly after the War first and second prize winners of competitions for housing projects in the City of Paris were chosen as being already experienced in what was to most French practitioners a new field. Missions were sent to study programs under way in neighboring countries and to report on their findings. For later work competitions have been held as for other public works. In the development of the plan a high degree of freedom and individuality has been permitted the architect. He is in charge of the project throughout construction and in some cases has made considerable changes during its progress. This freedom has proved stimulating to the architects and has produced interesting results.

The first projects to be carried out after the War were emergency in character and are of interest mainly as part of an evolution. In this situation German and Austrian lumber interests endeavored to market wooden houses and the French Parliament considered acceptance of a quantity of this cheap housing as part of the war debt payment in goods. After much argument "provisory" housing was decided upon for quick relief. These dwellings were planned for a life of 15 years only and both group planning and building forms were kept very simple. The construction, according to American small house practice, seems sufficiently permanent, with walls of hollow blocks, or with outer wall slabs of concrete, an intermediate air space and an inner lining with slabs of plaster. The interiors were in some cases plastered, in others papered on the rough wall. Roofs were of tile. At Bagnolet these single or double one-story houses were box-like and unpretentious but at Dugny, story-and-one-half cottages reveal in the curving street, in offsets of the building line, and in the greater importance given to roof surfaces, the influence of the English garden city,[24] at that time avowedly the French model. The "provisory" type of housing, however, was not produced in quantities large enough to ease appreciably the housing shortage. Its costs were higher than had been estimated, the whole notion of building semi-permanent dwellings had from the first been suspect, and the policy was soon abandoned. Less than 10 years after Bagnolet was built the Office Public was planning the demolition of its houses as unfit for habitation.[25]

The first 12 projects studied by the Department authority were launched in the spirit of the garden-city type. Some like Bagnolet, Nanterre, and Arceuil were indeed tiny villages and stopped at that stage, but the larger projects soon changed in character and in this evolution appears an important contribution to housing experience. Some, begun in the early 1920's and still growing, mark the trend away from the cottage toward more urban types, expressed both in the predominance of collective dwellings and in formality

[24] An account of the early post-War constructions is given by M. Sellier, *op. cit.*, pp. 596-882, and 1148-1163.

[25] Sellier, "L'Effort Francais pour L'Habitation Populaire", 87 *L'Illustration* 22 (March 30, 1929).

of design. Others are fully of the Law Loucheur program though even within that frame are many variations. After the waning of English influence a degree of German inspiration appeared. It was, however, superficial and now appears as but a slight trace in a modern manner of design which remains thoroughly French.

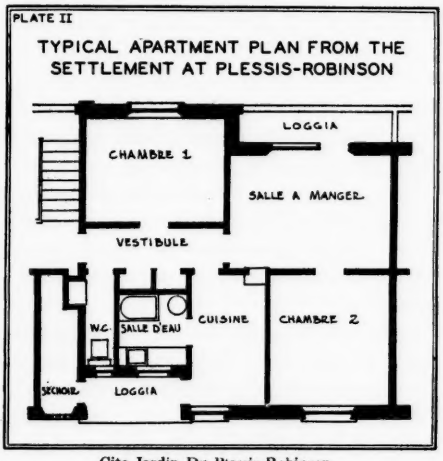
In exterior design the first cottages were not always sympathetically done by architects accustomed to more monumental work, and the collective dwellings that followed were tentative efforts to reconcile the exacting requirements of low-cost dwelling planning with the current version of the French apartment facade. In the later projects, however, designers have sensed the special problem and the special opportunity, and have brought in more direct solutions. The adoption of the collective type of dwelling group was not so much a swing from English to German ideals as it was an economic necessity imposed by steadily rising construction costs.

The general plan of the French housing settlement, at first featuring the picturesque, has become formal and rectilinear. Plessis-Robinson, the principal cite-jardin, had a first neighborhood with winding streets, but in its later and major development a grand boulevard provides a main axis and vista, intersected at right angles by more modest cross streets. Boulogne, a high-coverage, urban development, has a perimeter wall of apartments, with island buildings and courts within, all rectangular. With few exceptions the formal "grand plan" tradition has thus persisted, adapted to the economic necessities of low-cost housing.

Dwellings and dwelling groups are used in almost every sort of combination in each settlement. Units of from one to six rooms may be found in one apartment building, and dwellings of the three different rent classes may be combined in one block. The higher rent dwellings are given superior locations and are more spacious (cf. Tables IV, V, and VI), but otherwise they offer few special amenities. Apartment and house types are built in the same settlement. Gennevilliers, which began as a garden city with row houses, is being completed with large blocks of apartments on the principal bounding street. Suresnes, Plessis-Robinson, and Pre St. Gervais all use the outer perimeter of 4- to 5-story apartments, enclosing single, double, or row houses, or two-story flats within. Malabry has a three-story apartment development with a "skyscraper" 12-story apartment tower at higher rentals. Drancy-La Muette has five such apartment towers 14 stories high, in striking contrast to the 3-story horizontal blocks of dwellings forming the rest of the community.

Small apartments are in considerable demand but there are more four-room apartments than any other one type. A smaller number of 5- and 6-room dwellings is provided for the accommodation of the large families so elaborately subsidized in France. The usual apartment is rectangular in plan and the orientation of rooms to the common stair hall and to light and air is like that in Germany and elsewhere. One unit of the dwelling, however, is unique and wholly French. It is the "salle d'eau" or "water room," in connection with the kitchen and toilet. In the typical water room, as at Plessis-Robinson (Plate II), there is a short tub which is to be used for bathing and also as a laundry tub. The base of this tub is usually raised but even so the housewife has to get down on her knees to scrub clothes, much as she would at the riverside. The

kitchen sink is also in this room. It is a special piece of apparatus having a garbage receiver as an integral part of the fixture. Through the use of waste water this garbage is flushed into a large-diameter common stack and through sewers is led to a central drying and incinerating plant.[26] An auxiliary feature of the typical salle d'eau is a "sechoir" or drying compartment, ventilated through a screened wall, where the laundry is hung to dry. At Suresnes, one of the earlier settlements, a central bathhouse and a community laundry were introduced but the idea has not proved popular. Unlike the Vienna or German social group, the French family



Cite Jardin Du Plessis-Robinson.
M. Payret-Portail, Architecte.

is a self-contained unit and instinctively dislikes any regimentation of its activities. This sense of family insularity has led to the institution of the apartment laundry-bath.

Even more unusual, studio apartments have a minor but well established place in the French scheme of housing. They appeal not only to artists but to craftsmen of many kinds who may thus do their work and operate a small but independent business at home. There is no Bohemian connotation. These apartments with one high-ceilinged, well-lighted room in suite with one, two or three others of ordinary size present a special problem in planning and several solutions have been attempted. Rarely, as in the first hillside settlement at Plessis-Robinson, they have been placed in the basement. Usually they are located on the upper floor of an apartment block where it is easier to adjust ceiling levels and where they may be featured in the facade. A few have been built in two-family houses at Plessis-Robinson, pleasantly located in the edge of the wooded park. Still another type occurs in the urban project of Vanves where the two-story-high bulk of the studio proper is built against a four-story block, the other rooms of the studio apartment being incorporated in the lower stories of the larger building.

While the traditional brick wall type of building still persists, construction problems have been attacked with particular frankness and courage. Charenton has met a special problem in avoiding flood conditions on the Seine by providing a storage warehouse sub-basement. Gennevilliers has an efficient and economical type of porous cinder-concrete wall construction, and Drancy offers one of the most promising of prefabricated systems. Pre-cast concrete wall and floor units hung on a light steel frame are part of a novel and well integrated building technique. A special French contribution to housing experience lies in the field of construction.

Details of community life will be found well provided for. In apartment groups garaging space for carts, bicycles, and perambulators is commonly provided in a basement with ramped

[26] Another plan of this type from Maisons-Alfort is shown by Bennett, Wells, "An Analysis of Housing Practice," 146 *American Architect* 39 (June, 1935).

approach. Space for shops is usually incorporated in apartment buildings at some central point in the general plan. Except for some of the compact urban projects, space is also allowed for the open market so essential to French domestic economy.

As to the central heating of housing settlements, practice varies widely. Drancy-La Muette and Maisons-Alfort provide heat to all apartments from a central plant for the community. At Malabry small heating plants are installed in each building. At Suresnes and several of the others some of the apartments have central heat; others depend on a grate fire and the kitchen stove. Many tenants do not want to pay the supplementary charge for heat. It must be remembered that French winters, though cold, are not as rigorous as those of Chicago or New York, and that European ideas of temperature comfort are quite different from ours.

Although practical considerations may have forced the garden city from the French housing scene, there are apparently few regrets from the tenants, for the outlying settlements have been the most difficult to rent. The provision of transportation facilities is of first importance to the success of these projects, but the conservatism of the traction interests combined with the inertia of the Parisian working-class tenant has made many difficulties. The ring of projects is similar to those about London and Berlin but the transportation problem has not worked out so happily. Morden, an outlying suburban development of the London County Council, is as far from downtown and work as is Plessis-Robinson but busses run from Morden to adjacent suburbs and there is direct tube service to the heart of London. The great settlement of Onkel Tom's Hutte is 12 miles from Berlin, while Champigny is 10 miles from Paris, but from the German project frequent U-Bahn trains pass through industrial suburbs to central Berlin. At Champigny completed dwellings are renting slowly because the railway station is a quarter of a mile from the settlement and train service night and morning is poor. The success of Malabry is seriously threatened by its remote location and the lack of an adequate common carrier. Few of the possible tenants of these projects possess automobiles. Housing authorities charge that transportation authorities have not given cooperation and that the workers are therefore reluctant to leave their old and crowded tenements, convenient to work and pleasure. Conservative interests reply that the projects are ill-conceived; unsuited to housing needs by location and management. Neither opinion can be considered impartial. The problems of transportation in relation to effective decentralization would be nearer solution if there were public and official backing for the regional plan with its improved network of highways.

The Department of the Seine has laid out its communities with an accent on the formal plan. Special problems of private family life have been well studied and France shows us that in public housing there is another way than the socialist plan of life in common. In construction, experiments have been made which may affect all our housing construction and in the end enable us to offer better housing values. Difficulties in regional planning and in transportation are a warning to those launching a program.

Management. In the management of public housing projects the French have continued and adapted a familiar figure, that of the concierge, and tradi-

tional acceptance of this type of supervision has doubtless smoothed the way of public housing administration. Employed by the local authority this resident manager in charge of a portion of a cite-jardin shows and rents apartments and cares for the maintenance of all public spaces, such as common hallways, outer courts, and playgrounds. He sees to minor repairs and the numerous chores of the caretaker. This position is often a family matter with the wife assuming a good share of the actual work and carrying it out most capably. Actual signing of the leases and payment of rents are generally done at a central office for the whole settlement.

Working as part of the management and supported by funds of the Public Office are the social workers. As in the English Octavia Hill system these women humanize the public housing system by personal acquaintance with the problems of the individual families under their charge, endeavoring through these contacts to promote family and neighborhood harmony and betterment. Unlike the English system, however, these women do not have the management in charge. At Suresnes, and to some degree elsewhere, special attention is given those families so unsocial as to be trouble-makers in a neighborhood group.

Outside the excellent public schools built or being built in most of these settlements in the Department of the Seine, the social service of each community is developing classes in adult education. Courses in household economics are given at Stains and their extension, with others in practical gardening and interior decoration, is planned for several other cites-jardins. There are courses in modern languages and technical courses for apprentices in the industrial and building trades. For children there are courses in music. A chain of libraries makes reading matter available and permits interchanges between the settlements.

A health service has been established in most of the older settlements to give instruction in prenatal and child care, supervision in general hygiene, eye examinations, as well as general medical advice with dispensary service. These facilities will doubtless be provided in the later projects as they fill with tenants and become established. The City of Paris provides a similar health service for tenants of its many dwellings, employing four physicians. The health and cleanliness of children are periodically checked. In 1932 city health workers gave to children 6,658 baths.

Independent and often suspicious, sometimes lawless and highly communistic in social ideas, tenant families in public housing present difficult problems. This situation the social service attempts to solve by sympathetic yet tactful supervision, by health and social education, and by encouraging individual improvement. With these well tested sociological tools M. Sellier and his staff of workers plan to make their groups of dwellings come alive with workers' homes.[27]

Part II of this article will appear in the next issue of the *Journal*. It will be an economic evaluation of French housing effort in terms of accommodations provided, costs of the program, rents, and net costs, together with a brief summary. The tables referred to in this section will appear in Part II because their analysis constitutes the major portion of that section.

[27] Data on social and health service are given in the official *Rapport*, Conseil Superieur, 1932, pp. 16-7, and 1933, p. 76c.

Public Utility Legislation in the Depression:

II. Reorganization and Financing of Commissions

By D. L. MARLETT and ORBA F. TRAYLOR*

IN this instalment the survey of public utility legislation during the four years 1931-1934 inclusive will be carried further by an analysis of statutory provisions for changes in organization of commissions and their staffs and for their better financing by assessment of part or all of their expenses upon the utilities controlled.

Because of the breadth of the subject it will be necessary here, as in the first article, to omit extended comments or interpretations in order to allow space for the facts. The reader is reminded that the survey includes only the four years 1931-1934 and that the 1935 legislation will be discussed in the November issue of the *Journal*.

Commission Organization

Not all changes in the personnel and staffs of state utility commissions are are reflected in the statutes. The latter contain only the more basic provisions in the organic law and generally allow some latitude to the commissioners in their departmental organization and choice of personnel. Nevertheless, the statutes of nine states reveal trends of considerable significance.[1]

Changes in commission organization have apparently been inspired by two different and at times conflicting motives, the one looking toward economy of expenditure and the other toward better regulation. The economy aspect is seen in statutes which reduce the number and/or salary of commissioners and consolidate departments. The movement toward more effective control, on the other hand, has led in some instances to increased staffs and their reorganization along lines intended to meet the heavier demands now being put upon them.

Staffs have doubtless been increased quite as frequently as they have been cut; and this permits some doubt as to whether the net result has been economy or improved regulatory machinery.

The further tendency has grown of making commissioners more directly responsible to the public and also more responsive to the administration by facilitating their removal from office. At the same time, an attempt has apparently been made to instill into several commissions, formerly dominated by a judicial attitude, the feeling that they are administrators who must vigorously protect the public interest.

New Commissions. Only one state during the four-year period under review has created a public utility commission where none had been before.[2] This was Kentucky, which established the "Public Service Commission of

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For this as for the first instalment the basic data were prepared by the Section of Rates and Research of the Illinois Commerce Commission.

For the first instalment of this article, entitled "Public Utility Legislation in the Depression: I. State Laws Extending and Strengthening Commission Jurisdiction," see 11 *Journal of Land & Public Utility Economics* 173-186 (May, 1935).

[1] Arkansas, Illinois, Indiana, Kansas, Kentucky, North Carolina, Oregon, Utah, Wyoming.

[2] Although several states have so extended the jurisdiction of their commissions as practically to have established them on a new basis, they will not be considered as "new commissions."

Kentucky" with jurisdiction over the so-called local (including municipal) utilities.[3]

The Kentucky commission consists of three members with four-year overlapping terms of office; the commissioner with the longest term of office acts as chairman. Contrary to the trend during this period, an attempt was made to free the Kentucky commissioners from political influence by providing that only two shall belong to the same party and that "if any of said commissioners becomes a candidate for public office or becomes a member of any political party committee his office as commissioner shall be vacated *ipso facto*." Furthermore, no member of the commission shall be eligible for election to any public office until two years after he has ceased to be a commissioner. Commissioners are appointed by the governor with the advice and consent of the senate, and may be removed by the governor for cause after a public hearing, from which decision the commissioner may appeal to the courts.[4]

Changes in Size and General Organization. In several states (Arkansas, Illinois, Indiana, Kansas, North Carolina, Oregon, Utah, and Wyoming) the number of commissioners has been reduced. This represents an attempt to transform the more cumbersome regulatory agencies into effective administrative bodies with an economy in salaries, and a more precise location of responsibility upon the one or more remaining members. An attempt to lower the number of members of the South Dakota commission was defeated by referendum.[5]

The Indiana commission was reduced from five to three members whose terms still remain at four years, each expiring at a different time. Removal is now possible "by the governor at his pleasure;" formerly this was possible only "for incompetency, neglect of duty, or misconduct in office after notice and hearing."[6] The appointment of the secretary has been transferred from the commissioners to the governor. A new officer in Indiana is the public counselor, whose office will be discussed later.

Illinois likewise reduced the number of commissioners (from seven to five) and salaries (from $7,500 to $6,000). But whereas in Indiana the commission has been coordinated with other offices under the department of trade and industries,[7] the Illinois Commerce Commission was removed from the nominal supervision of the department of trade and commerce, which was dissolved, and reorganized into a major "department" of the state government.[8]

In Kansas a more substantial reorganization resulted in the creation of a new State Corporation Commission to which were transferred the functions of the former Public Service Commission, Bank Commissioner, and State Charter Board. The Corporation Commission

[3] The Railroad Commission was left intact with control over transport utilities.

Except where otherwise noted all citations are given in the chart on page 296.

[4] Most of the laws enacted in other states during this period made the governor's power of removal absolute, and closed the courts to appeal by the removed commissioner.

[5] Upon petition by shippers of the State, a law abolishing the old elective Railroad Commission and substituting a one-man board appointed by the governor was submitted to referendum and defeated by an overwhelming majority.

[6] Burns Ann. Ind. Stat. 1926, § 12673.

[7] Burns Ann. Ind. Stat., 1933, § 54-101, compiler's notes.

[8] The former department of trade and commerce exercised no influence over the commission, for the law specifically stated: "This Act shall be administered by the Illinois Commerce Commission created by the Act and in its name without any direction, supervision or control by the director of trade and commerce." (Smith-Hurd Ill. Rev. Stat. 1931, c. 111-⅔, § 1.)

now consists of three members, as did the former Public Service Commission, but with salaries reduced from $4,500 to $3,000 per year and with the same four-year terms expiring alternately. Thus the State apparently saved the $5,000 salary of its former bank commissioner and at least some of the $3,300-$3,600 salaries of his five assistants. No saving resulted from abolition of the Charter Board, since it was composed of the attorney-general, secretary of state, and bank commissioner *ex officio*. Control of utilities, charters, banks, and speculative securities is now vested in one and the same commission.

In three states (North Carolina, Utah, and Oregon) one-man commissions have been established, the former two states also providing two part-time commissioners paid on a *per diem* basis. The change in North Carolina abolished the former elective Corporation Commission of three members[9] and substituted one elective commissioner whose salary is $4,500 and two assistant commissioners appointed by the governor for four-year terms. Their stipends are $25 per working day plus expenses, but may not exceed a combined total of $1,800 per year. The two assistant commissioners are to sit with the commissioner as a Court of Record, to be known as the Utilities Commission, in controversies involving as much as $3,000 and in such other cases as the utility commissioner considers of public interest.

A similar change in Utah substituted for the former Public Utilities Commission, which had consisted of three appointive members with salaries of $4,000 each, a commission composed of one full-term member, a part-time member, and the state engineer *ex officio*. The full-time member and part-time member are each appointed for four-year terms expiring alternately in odd numbered years and must belong to different political parties. The former's salary is a maximum of $3,500 per year, and the part-time member is paid $10 a day for days actually worked with a maximum of $2,000 per year, the law stating that the board of supplies and purchases shall fix their actual compensation.

The Oregon Public Utility Commissioner replaced the former commission which consisted of three members, one from each of two state districts and one from the state at large, appointed by the Governor, each of whom drew a salary of $4,000. The new commissioner is appointed by the governor and is paid $7,500 per year, the highest salary provided under any of the new statutes. He may be removed by the governor at any time "for any cause deemed by him sufficient," without appeal to the courts. As will be pointed out later, the commissioner is specifically charged with representing the interests of consumers and the public.

Arkansas has now progressed through a rather interesting cycle of integration and redivision of functions in its regulatory machinery. In 1921 this State established a Railroad Commission to take over the functions of the older Corporation Commission. In 1933 the latter was revived and the Railroad Commission abolished. With the new Corporation Commission were merged the Commissioner of Conservation (an office established in 1925) and the Tax Commission. By this consolidation seven commissioners were replaced by three, and salaries were reduced in even greater ratio. Later in 1933, however, functions were again segregated. A Conservation Commissioner was recreated as a separate state agency, and

[9] Code of 1931, § 1023.

a "Fact-Finding Tribunal" was established as a bureau of the Corporation Commission to aid the latter in its investigation and regulation of public utilities. The Fact-Finding Tribunal consists of three members appointed by the Corporation Commission with the approval of the governor (and to serve at his will) at salaries of $5,000 per year, salaries which contrast with the $3,600 paid to members of the Corporation Commission itself. Unlike the commissioners, however, the three members of the Tribunal are each to be qualified members of different professions. The statute provides that "one shall be a skillful lawyer, one an expert engineer, and one an expert accountant." One of the members acts as secretary. Discussion of the functions of this bureau is reserved for treatment below.

In Wyoming the Public Service Commission was increased from three to four members by reason of the increase in the membership of the State Board of Equalization which is *ex officio* the Public Service Commission.

Organization of the Staff. Significant though staff reorganizations are, only those few can be commented upon here which find their organic basis in specific statutory enactments. Reference to such important staff additions, for example, as the rates and research divisions in Wisconsin and in Illinois, and also the office of superintendent of investigations and the legal section in the latter State, is generally to be found in the annual or biennial state budgets or in the annual reports of the commissions and have not been included in this study of legislative changes. Several states, however, have made specific statutory changes concerning their public utility commission staffs.[10]

The Arkansas Corporation Commission's Fact-Finding Tribunal, whose general organization was discussed above, is an interesting example of a staff bureau of investigation provided for in the legislative acts. Its jurisdiction is described as follows:

> "The Tribunal shall have power, and it is hereby made its duty, to investigate and make a finding of all facts entering into or forming the basis of rates to be charged for any service supplied by any public utility . . . Such investigation, and finding of facts, shall be made at the instance of any city or town council, utility company, or of the Corporation Commission."

The Tribunal is given power to subpoenae witnesses, administer oaths, compel production of records, inspect properties, and receive evidence. The law further states: "All findings of fact made by the Tribunal . . . shall be conclusive on all parties, in the absence of fraud, or of error so gross as to be tantamount to fraud." After providing for utilities' reports of capitalization, financial statements, officers, contracts, etc., and for the maintenance of the Tribunal through assessment provisions (see next section), the law specifically directs the Tribunal to "furnish legal assistance, by its lawyer member, to any city or town or to the Corporation Commission, in any litigation involving the reasonableness or validity of any rate based on a finding of facts made by the Tribunal under this act." Thus an effective arm was extended to the Arkansas Corporation Commission for regulating utilities in that State.

Mention should also be made of the office of public counselor in Indiana, created in 1933, and referred to above. The counselor may be appointed and removed, at the pleasure of the governor, and may receive a maximum

[10] Minor changes in the law, such as those in South Carolina and Vermont giving commissions specific *statutory* authority to hire experts, clerical staff, etc., are not treated in this discussion.

salary of $6,000. He must have been a practicing attorney experienced in public utility affairs. He is specifically directed to appear in behalf of ratepayers and the public in all matters before the commission, in appeals from commission orders, or in suits to which the commission is made a party.[11] The counselor is authorized to avail himself of the services of the commission's staff and may hire such additional experts or clerical help as the governor may approve.[12]

The Oregon law creates no special officer to represent ratepayers. Instead it charges the commissioner to represent utility consumers in all controversies, and to protect them from "unjust and unreasonable exactions and practices and to obtain for them adequate service at fair and reasonable rates."

Commissions usually are represented by the attorney-general's office when they are involved in legal questions. The South Carolina law continues this relationship with the proviso, however, that the attorney-general is authorized to employ an additional legal counsel upon recommendation of the commission. Similarly, the Georgia law specifically provides for one of the six assistants to the attorney-general to serve the Public Service Commission as its special attorney, and for additional assistants to be appointed for special purposes as the governor may designate. The Virginia law reverted to this class when the office of special legal advisor or counsel to the commission was eliminated and its duties transferred to the attorney-general.

[11] "In all proceedings before the commission and in any court in which he shall appear, the counselor shall have charge of the interests of the rate payers and patrons of the utility and utilities involved and he shall give notice of such hearing to all municipalities, corporations, organizations and persons, parties to such proceedings, suit or action, other than such utility or utilities."

Assessing Utility Companies for the Costs of Regulation

A number of states have acted recently to shift the costs of commission operation directly to the utility companies. Although this method of financing commission costs is not new (several states having adopted it a number of years ago), its rapid extension since 1930 represents a significant trend. On the one hand, this new source of financial support may gradually bolster state regulation to the point where it can deal on more equal terms with contending utility companies than formerly has been the case. At the same time there appears to be some ground for believing that to the extent that the companies, and eventually ratepayers, are made to carry all costs of regulation (the commission's as well as their own) the public may become more conscious of what regulation is costing.

The rapid spread of the movement to assess utilities for commission expenses is directly traceable to the simultaneous demand for relief to taxpayers and the heavier volume of expensive rate work demanded of the commissions. Also evident is the feeling that utility regulation should pay its own way by indirectly levying upon consumers some of the cost of securing rate cuts. Some of the statutes, too, indicate the attitude that companies which engage the commission in extended rate controversies should bear part or all of the expense they cause.

It should be clearly realized, however, that commission expenditures have not

[12] The influence of the governor on the above office is readily apparent. Such influence was also increased over the commission staff as a whole by the amendment using the words "The governor may employ" experts, etc., in place of the wording: "The commission is authorized, with the advice and consent of the governor, to employ . . . ." (Burns Ind. Stat. Ann. 1933, § 54-106).

necessarily been increased by the full amount of the assessments they now levy upon the utilities, since assessments are in the class of revenue measures and expenditures of state organizations are controlled by legislative appropriations. The assessments in many states have merely added to the general funds of the state governments. Perhaps this fact has in itself encouraged larger appropriations to the commissions. Also a few states have given their commissions access to all assessments collected by direct authorization to expend the amount of the fees received. Others have established revolving funds.

The principal aspects of the assessment laws to be noted are: (1) How much of the commission's expenditures are billed to the utilities, i.e., its entire expenditures or only the costs of rate or other investigations? In the latter event, are salaries of regular employees or only the out-of-pocket cost of additional employees retained for the purpose so billed? (2) In what manner are assessments made? (3) Is any top limit put upon the amount that companies must pay? (4) Who gets the assessment money—the state treasury, the commission itself, or the individual employees of the commission who are paid directly by utility companies on vouchers certified by the commission? (5) What is done with the money paid to the commission or state treasury?

Nature of Commission Costs Assessed against Utilities. The problem of financing state regulatory functions is so largely local that each state commission and legislature has its own ideas on the subject and incorporates them into what becomes a collection of heterogeneous provisions. Nevertheless, certain common practices are evident. In general, the costs which may be assessed against a utility company are of two classes: (1) expenses of special investigations into its affairs; and (2) its pro rata share of the total expense of maintaining the commission. Special investigations, in turn, are of two general types: (a) those for examination of a utility's rates or service, including valuations and appraisals; and (b) those made on a utility's petition for authority to issue securities. A further distinction is made in the cost of special investigations—namely, that the costs may include salaries and expenses of both regular and temporary employees, or of temporary employees only. In the legislation on this subject during the years 1931-1934 inclusive are examples of all these types of assessments with combinations of them in certain cases[13] and variations in others.[14]

The assessment provisions in Wisconsin are outstanding in that they consist of a combination of direct and indirect cost assessment laws, which assess all commission costs (except a few miscellaneous items, such as commissioner salaries) against the utilities regulated, and which define "special investigations" for direct assessment purposes in a broad manner. Occasion for assessment of direct costs arises whenever the commission

> "shall deem it necessary in order to carry out the duties imposed upon it by law to investigate the books, accounts, practices and activities of, or make appraisals of the property of any public utility, power district or railroad or to render any engineering or accounting services."

These costs are assessed against utilities (which include public plants in this State), power districts, or railroads. In addition, the commission assesses against these corporations the costs incurred in

[13] Note especially Oregon, Washington, and Wisconsin in the following discussion.

[14] Such as Arkansas and Wisconsin.

CHART I (*Continued*). PUBLIC UTILITY LEGISLATION IN THE DEPRESSION*

State	Commission Reorganization	Assessment of Cost
1. Alabama		Acts (extra Sess. 1932), No. 232, §9
2. Arizona		Laws 1933, C. 83, §§ 1-4
3. Arkansas	Acts 1933, No. 12, §§ 1-7; No. 72, §§ 1-15	Acts 1933, No. 72, §§ 8, 9
4. California 5. Colorado 6. Connecticut 7. Delaware 8. Florida		
9. Georgia	Acts 1931, No. 298, §§ 90-93, p. 38	
10. Idaho		
11. Illinois	Laws 1933, p. 840, §§ 1, 2a, 10a	Laws 1933, p. 849, § 41a
12. Indiana	Acts 1933, C. 93, §§ 1-4	
13. Iowa		
14. Kansas	Laws 1933, C. 275, §§ 1-6	Laws 1931, C. 240, §1
15. Kentucky	Acts 1934, C. 145, §§ 1, 2, 3	Acts 1934, p. 580, § 8
16. Louisiana		Acts 1934 (2nd Extra Sess.), No. 20, §§ 1-5
17. Maine 18. Maryland 19. Massachusetts		
20. Michigan		Public Acts 1933, No. 12
21. Minnesota 22. Mississippi 23. Missouri 24. Montana 25. Nebraska 26. Nevada		
27. New Hampshire		Laws 1931, C. 127
28. New Jersey 29. New Mexico		
30. New York		Laws 1934, C. 282; 286, § 1
31. North Carolina	Laws 1933, C. 134	
32. North Dakota	Laws 1933, C. 220, §1	Laws 1933, C. 220, §§ 4 (2), 5
33. Ohio	Laws 1931, p. 53; Laws 1933, p. 230	
34. Oklahoma		
35. Oregon	Laws 1931, C. 103, §§ 1-5	Laws 1933, C. 190; 441, §§ 15, 27, 28, 29
36. Pennsylvania 37. Rhode Island		
38. South Carolina	Acts 1932, No. 871, § 4 (n)	Acts 1932, No. 871, § 4 (q)
39. South Dakota	Sess. Laws 1933, C. 166, p. 178	
40. Tennessee 41. Texas		
42. Utah	Laws 1933, C. 52, p. 92	
43. Vermont	Laws 1931, No. 98, § 1	
44. Virginia		Acts 1933 (Extra Sess.), p. 30
45. Washington		Laws 1933, p. 610, § 12
46. West Virginia	Acts (Extraordinary Sess.) 1932, C. 20, § 5(m)	
47. Wisconsin	Laws 1931, C. 183, § 2	Laws 1931, C. 183, 475; Laws (Spec. Sess. 1931), C. 16; Laws 1933, C. 4, 298, 438
48. Wyoming	Sess. Laws (Spec. Sess. 1933), C. 37, § 1; Sess. Laws 1933, C. 119, § 1	

*Continuation of corresponding chart in first instalment of this article referred to above.

investigating their petitions for authority to issue securities, and against municipalities the costs of special services in proceedings involving municipal acquisition of private plants. At the end of the year the balance of assessable commission expenses (after deducting special assessments) is charged to the utility companies in proportion to their gross intrastate operating revenues.

In a somewhat similar fashion the Oregon Commissioner assesses all costs of special investigations against the utilities in case of applications for authority to issue securities and where the commissioner finds

> "any charge of the utility investigated to be excessive, or any practices of the utility to be unreasonable or improper . . . if the offense be found by him to be serious . . . ".

Thus a punitive clause is introduced into the Oregon statute as a variation from other types of laws. Still another unique provision is found in the Oregon law. In case the Commissioner requires an emergency appropriation to supplement the regular gross receipts fee assessed to maintain his office,[15] and has it approved by the emergency board, he may thereupon demand and collect this amount from the utilities. Thus the office of Public Utility Commissioner in Oregon is fully supported, as in Wisconsin, by assessments on gross receipts to cover not only regular but emergency expenditures, and by special assessments.

Washington, too, now has a combination of general maintenance and special investigation assessment provisions. The general maintenance, gross receipts fee, however, was originally levied in 1921 and now amounts to $\frac{1}{10}$ of 1% of gross intrastate revenues[16]. In 1933, the Legislature appropriated $250,000 for rate investigations and valuations of utility properties and authorized the Department to assess all costs of these proceedings against the utilities involved, in order to recover most, if not all, of the special appropriation. However, the law does not expressly apply to investigations of petitions for authority to issue securities.

Besides the above laws embodying both direct and indirect assessments (the combination group), several statutes provided for total maintenance of the commissions by one general assessment. This group includes Alabama,[17] Arkansas, Kentucky, and South Carolina. The Arkansas law, however, applies only to the expenses incurred by the Fact-Finding Tribunal, and the South Carolina law to the costs of administering the electric utilities act.[18]

Akin to the general maintenance provisions, and also to the special investigation laws to be discussed below, are the hybrid provisions to be found in the Virginia and West Virginia [19] laws. These statutes are referred to as hybrids because they raise only the costs of special investigations but employ for this purpose the gross receipts fee more generally used to provide for the entire

[15] The gross receipts fee unlike the Wisconsin assessment is graduated with a top limit of $4,000 (except for emergency assessments) and was established long before the period here reviewed. In 1933, however, these fees were increased in amounts, as were many petty fees.

[16] Rem. Rev. Stats. 1934, §§ 10417, 10418.

[17] The Alabama law was originally passed previous to the period under review to provide for support of the commission by assessment against utilities of a graduated gross receipts fee. In 1932, however, this fee was increased in amount and the previous top limit of $3,000 was eliminated.

[18] The South Carolina Commission expenditures in administering previously passed acts are similarly assessed against the corporations regulated. Cf. Code of 1932, §§ 8249, 8250.

[19] For a discussion of this state's new 1935 utility legislation, see the next issue of the *Journal*.

support of the commissions. Thus all companies are made to bear the costs of reports, appraisals, and other investigations which may be made of only part of their number.

A number of states enacted laws for assessing against utilities only the costs of special investigations. These seven states (Arizona, Illinois, Kansas, Louisiana, New Hampshire, New York, and North Dakota), however, do not charge the utilities for the full costs of regulation; they charge only for special investigations, as variously defined in their laws, and the commission charges are paid only by the utilities being investigated.

The New York law, although very broad in scope, does not expressly apply to investigations of petitions for authority to issue securities.[20] It applies to any proceeding in which the commission

"shall deem it necessary in order to carry out its statutory duties, to investigate the operations, service practices, accounting records, rates, charges, rules and regulations, or to make valuations, or revaluations of the property of any public utility."

All costs incurred in such proceedings are to be assessed against the utilities involved. Arizona's assessment law contains similar, though not as comprehensive, provisions,[21] for only the costs of temporary employees must be paid by the utilities investigated.[22] In Illinois, Louisiana, and Virginia the commissions may assess against the utilities costs of special investigations of their rates or services, with no provision for assessing those costs incurred in investigating proposed security issues. The Illinois law applies only to "any proceeding before the Commission involving the determination of rates or services." The Louisiana law applies to any examination "for the purposes of fixing and regulating the rates charged or to be charged or services to be rendered . . . ."

In the above general class is the Kansas law, which is a variation, however, in that it is even more punitive in nature than the previously discussed Oregon law. All commission costs are assessed in special investigations when the commission shall find rates unreasonable, practices unjust, or service inadequate,

"Provided, that such order shall not become operative unless the matter . . . shall have been finally determined, by appeal or otherwise, adversely to such public utility."

In New Hampshire[23] and North Dakota the assessment laws appear to apply only to investigations of rates. However, under a New Hampshire law of 1921, this commission assesses against the utilities its costs incurred in investigating petitions for authority to issue securities.[24] The North Dakota law, on the other hand, does not assess the

[20] However, new fees are provided for this purpose, graduated on the basis of the amount of securities to be issued.

[21] The law applies whenever the commission "shall deem it necessary to investigate the books, accounts, practices and activities, and/or make appraisals of the property of any public utility, except common carriers."

[22] "Such utility shall not pay any part or portion of the compensation, salary or expenses of any members of the Arizona Corporation Commission, or its successors, or any person who is related by blood or marriage within the third degree to any member of the Corporation Commission, or its regular employees, or of any state officer, his deputies, assistants or employees."

[23] The New Hampshire laws provide: "Whenever any investigation shall be necessary to enable the commission to pass upon the reasonableness of the rates or charges by a public utility, the utility shall pay to the commission its expenses involved in the investigation . . . but not including any part of the salaries of the commission."

This same section of the law previous to amendment in 1931 applied only to any investigation "necessary to enable the commission to pass upon any proposed increase in rates."

[24] Public Laws, c. 238, § 35.

costs of investigating proposed security issues, but only those incurred for hearings, investigations, and proceedings in rate matters.

Manner of Assessing Fees. The various assessments described above are levied in several ways which may be briefly summarized. Fees may be levied: (1) as a percentage of, or in proportion to, the gross receipts of all utilities in the state in the case of general maintenance assessments; and (2) by mere rendering of bills to utilities investigated for the amount of expenses actually incurred by commissions. There are, of course, combinations of, and variations from, these two types.

The states with both the general maintenance assessments and the special investigation assessments (Oregon, Washington, and Wisconsin) levy the former on all utilities regulated on the basis of their gross intrastate revenues, and the latter on only those utilities which are investigated by rendering bills for expenses incurred. Oregon and Washington, however, are to be distinguished from Wisconsin in the case of general maintenance assessments in that their fees are a definite amount of the utilities' gross intrastate revenues, while the Wisconsin fee is the so-called remainder assessment computed at the end of the year by deducting from total assessable commission expenses those which are assessed as special investigation fees, and apportioning the "remainder" to all utilities in the State in proportion to their gross intrastate revenues.[25] In Oregon and Washington the general maintenance fee is assessed independently of the special investigation fee;[26] in Wisconsin it is dependent upon the amount of expenses incurred by the commission and the amount assessed for special investigations.

The four states with only the general maintenance fees (Alabama, Arkansas, Kentucky, and South Carolina) levy them against all utilities in the state according to their gross intrastate revenues.[27] The Alabama fee is a specific, graduated levy, while in Arkansas it is a flat levy ($2.00 per $1,000). In Kentucky and South Carolina, however, the legislatures appropriated definite sums for the commissions[28] to be apportioned to the utilities.

Virginia and West Virginia are the states with hybrid assessment provisions—a general fee against all utilities to be used for special or additional investigations. In the former State the fee is 3/10 of 1% of gross intrastate receipts;[29] in the latter State a definite appropriation of $90,000 a year for two years ending in June, 1935 was charged against the utilities in proportion to their gross intrastate business.[30]

The seven states which assess only costs of special investigations against the utilities being investigated (Arizona, Illinois, Kansas, Louisiana, New Hampshire, New York, and North Dakota) do nothing more than render bills to the companies to cover the commission costs. The states provide for enforce-

[25] The laws use various terms, such as "gross receipts," "gross earnings," and "gross revenues," but it appears in all cases that the legislative intent is to levy the fees upon the basis of the gross amount of intrastate business billed to customers.

[26] The fees are graduated, however, on the basis of the amount of gross intrastate revenues.

[27] See note 25, *supra.*

[28] $35,000 per year for the administration of the electrical utilities act in South Carolina and $75,000 per year for Kentucky. For the first 2½ years beginning in 1934, however, the Kentucky act provides for the $75,000 to be raised by a tax of 1/10 of 1% of the assessed value of the utilities' property.

[29] Increased from 1/10 of 1% as established in 1924 and estimated to produce $88,500. The Corporation Commission was appropriated an additional amount of approximately the same size for regulating utilities, of which $35,000 was also designated for special investigations.

[30] See p. 297, *supra.*

ment of the commission's orders to utilities to pay the bills rendered, but permit an appeal to the courts in case of a dispute as to their reasonableness or constitutionality.[31] A unique provision in North Dakota, however, states that in case of non-payment of any bills, the commission is to report them to the State Board of Equalization to be assessed against the property of the utilities and collected as a regular property tax, which "shall be paid as a condition precedent to the right of appeal from any order or decision of the Board of Railroad Commissioners."

Statutory Limits on Utility Payments. With the exception of Wisconsin, those states with general maintenance (or indirect) assessment laws provide for definite fees based upon gross revenues or for definite sums to be apportioned upon the basis of gross revenues.[32] These fees or sums are themselves statutory limits to the amounts that the utilities must pay. This is true also for Virginia and West Virginia, where a specific fee in the former state and a definite sum in the latter are provided for the purpose of special investigations. Since the Wisconsin general maintenance assessment is dependent upon the amount of commission expenses and the amount assessed for special investigations, a specific fee or definite sum could not be fixed in the law. The "remainder" assessment in this State, therefore, is limited to a proportion of the utility's gross intrastate revenues—⅕ of 1% in any one year.

Two of the three states which have special investigation assessment laws, in addition to the general maintenance assessments, provide for a statutory limit to the amount that utilities must pay for special investigations, in the form of a percentage of gross intrastate revenues. In Wisconsin this limit is ⅕ of 1% in any one year, which complements the above general maintenance fee limit of ⅕ of 1%. In Oregon the total of general maintenance fees[33] and special investigation fees may not exceed ½ of 1% of the utility's gross intrastate revenues in any one year. This limits the total assessments to 50% of what the Wisconsin commission may levy. Washington, the third state with both direct and indirect assessment laws, has no statutory limit upon assessments for a special investigation.

Three (Kansas, Louisiana and North Dakota) of the seven states with only special investigation assessments do not have a statutory limit upon what utilities must pay. In Kansas, however, the punitive provisions[34] tend in a measure to protect the utility companies from unjust investigations, for the commission can collect its costs only in case the matter is finally determined adversely to the utility.

The Illinois and New York laws provide for special investigation assessment limits in any one year of ½ of 1% of the utility's gross intrastate revenues. In Arizona the law is a little more liberal, the limit being graduated with the amount of the utilities' gross revenues. The fees in any one year may not exceed 2% of the first $200,000 of revenue, 1% of the next $800,000, and

[31] In the critique of legislation enacted during the depression, to be given in the final instalment of this series of articles, a brief review of the court tests of the various laws will be made.

[32] Specific fees in Alabama, Arkansas, Oregon, and Washington; specific amounts to be apportioned in Kentucky and South Carolina.

[33] In Oregon there is also a limit to the amount of emergency general maintenance fees (discussed in the first part of this section) that a utility may be assessed. The emergency fee cannot exceed 100% of the regular gross receipts fee paid for maintenance of the commissioner's office.

[34] See p. 298.

¾ of 1% of all over $1,000,000.[35] New Hampshire, the last state to be mentioned, provides for an assessment limit in any one year of ½ of 1% of the utility's *existing valuation*.[36]

Collection and Disposition of the Fees. In almost all states the state treasurer is the final recipient of the fees assessed by state commissions against utility companies. In eight of the 16 states he is also the collecting agency.[37] In three states the commission is the collecting agency which then turns the funds over to the treasurer,[38] while in one state (New York) the law provides that the funds are to be turned over by the commission to the Department of Taxation and Finance. The Arizona, North Dakota, and Virginia commissions may collect the fees and use them directly in paying their expenses. Louisiana is unusual in that the expenses are to be paid by the utility companies directly to the person or persons certified by the commission as having rendered services or furnished supplies.

Concerning use or disposition of the funds collected, the laws contain a variety of provisions. Apparently, in those states in which commissions are fully supported, the fees are held in special commission funds, some of which require legislative appropriations to make them available for defraying commission expenses; [39] others are appropriated by law directly to the commission.[40]

Of those seven state commissions which assess only the costs of special investigations against utilities, two of them (Arizona and Kansas) have access to all collected fees for payment of their expenses. In New York a distinction is made between the portion of collected fees representing expenses and salaries of temporary employees, and those of the regular commission staff. The former portion is put into a $300,000 revolving fund, which was established by the law, again to be used by the commission. The latter portion is paid into the state general revenue fund and is not again available to the commission except by legislative appropriations. Louisiana procedure has been described. In the other states in this group (Illinois, New Hampshire, and South Carolina) it appears that the collected fees are credited to the state general revenue funds and the commission must obtain a legislative appropriation for authority to use them.

The remaining articles of this series will survey the 1935 public utility legislation and conclude with a critical summary and interpretation of all public utility legislation since 1930, Federal as well as state.[41]

[35] It should be recalled, however, that only the costs of temporary employees may be assessed in this State. (See note 22, *supra*.)

[36] This appears to be quite liberal, for assuming that a utility "turns" its capital once in every five years, the New Hampshire commission can assess utilities five times as much as can the Illinois or New York commissions.

[37] Arizona, Illinois, Kansas, Kentucky, Oregon, South Carolina, West Virginia, and Wisconsin.

[38] Alabama, New Hampshire, and Washington.

[39] Kentucky, South Carolina, West Virginia, and Wisconsin.

A revision of the Michigan general assessment law (originally passed in 1921) takes Michigan out of the group which may use the funds directly upon collection and transfers it to this group which must secure a legislative appropriation.

[40] Alabama, Arkansas, Oregon and Washington. But later in 1933 Oregon passed a law (Laws, c. 405) stating that the public utility commissioner's fees should be paid into the general fund of the State for general state expenses. It seems, however, that the fees referred to are only a portion of the various ones assessed by the commissioner for no appropriation was provided for the latter in the 1933 laws.

[41] This projected outline, however, may be subject to some change in order to allow for inclusion in the series proper or in a separate article a discussion of the legislation of the period affecting public ownership of utilities. The volume of such legislation, together with the amount of enactments on assessment of costs, precluded publication of both subjects in this issue of the *Journal* as originally planned.

Urban Land Department

MORTON BODFISH, *Editor*

Group Rehabilitation of Depreciated Properties

THERE are few cities and towns in the United States which do not face both a social and an economic problem of what to do about depreciated districts. At a time of widespread unemployment, it seems logical to utilize the unemployed to make our American cities more desirable places in which to live, to improve their facilities, and to get rid of friction and conditions which are wasteful of human life and effort.

To date, however, so-called slum clearance has met with very little success. Progress has been made in the analysis of the problem. In this connection the work of the Land Utilization Committee of the New York Building Congress has been significant.

For the past two years between 100 and 250 technical men have been assigned to the staff of the Committee and it has been my privilege to serve in a volunteer capacity as the director of studies. The Committee was formed under the chairmanship of Ralph Reinhold to study the problems of land usage and their effect upon construction and the design of buildings. The men who were gathered together in this group included architects, engineers, professional economists and statisticians, and one banker.

When the use of technical men on relief payrolls was offered to the Committee, it was at once apparent that a golden opportunity had presented itself for gathering field material. Men were sent into selected depreciated districts with instructions to gather data respecting the physical condition of the buildings therein and their economic and social condition as well. Careful examination was made of rents and vacancies and also of the various items of outgo. It was found at once that a preponderant share of expense went into futile maintenance charges.

The Committee's findings appear to point the way to a rehabilitation of depreciated properties by a different approach from that usually associated with real estate although it is familiar enough in the case of industrial enterprise. Any industrialist knows that when his gross income declines he must combat a shrinking market with a reduction in the cost of the service furnished. Owners and mortgagees of real estate also realize that costs must be reduced and they are likely to think of buying less fuel, doing less repairs, and paying less to janitors and other employees. Real estate has been slow to appreciate what a past generation taught to industry—namely, that combination and improved industrial methods can effect savings so that industry may increase the effectiveness of the man power which it employs.

Looking at the problem from this point of view it was assumed at the outset that the Land Utilization Committee had been called in as adviser to at least a block of owners in a distressed neighborhood. In this capacity the Committee pointed out that a rearrangement and improvement of the space offered for use might produce economies which would show a way out of the difficulties involved. For example, in the first block studied, 12 of the 24 property owners were losing money after paying taxes and maintenance charges but prior to the payment of interest on mortgages. Two of the 24 buildings were found to be earning 60% of the net income for the whole block. Forty per cent of the space in the block was found to be vacant.

It was demonstrated that those buildings in the poorest condition could be demolished, such few tenants as they contained accommodated in other buildings, and the block operated without loss of income and with reduced outgo as a result of saving on maintenance cost and taxes. The initial proposal was equivalent to putting the entire block in the hands of a trustee with instructions to administer it as one entity, charging to each owner a proportionate share of the reduced expenses and crediting him with savings in the same proportion.

It remains to be seen whether or not the owners of real estate, particularly of urban real estate, will be alive to the possibilities of group action. There can be little question but that our changing habits of life have had their effect upon the methods of land usage and, conversely, accepted methods of

land usage have imposed limitations upon methods of living. Our modern apartments have followed the limitations of the original boundaries laid out for the use of single-family homes. The restrictions of the narrow lot have been the chief cause of narrow courts and bad distribution of open spaces. We are only beginning to learn what may be possible through designing and constructing in larger units.

The alternative between the multi-family dwelling and the single-family home is not the sole issue. The single-family home, regarded as an individual unit and placed on an individual lot without consideration of the neighborhood of which it is a part, has little stability. Changing forces in the neighborhood, whether they be economic or social, will affect the rate of both depreciation and obsolescence. Some form, therefore, of group control or group protection is as essential to the single-family home as to the multi-family dwelling.

The multi-family dwelling, as we know it to date, has been largely a makeshift. In the first stage, two or more families have been brought into the depreciating dwelling in an attempt to make it earn in spite of the fact that obsolescence and depreciation have destroyed its original purpose. Through congestion it may then appear that the value of land has increased and accordingly the attempt is made to replace an original makeshift with a building designed as a multi-family dwelling. We have fallen into the error of thinking that intensive land use was the only remedy, whereas the majority of our land was being put to uneconomic and wasteful use.

Progress has been delayed today for lack of a proper method for designing on a large scale for properties that already have been cut up into individual small holdings. The situation is further complicated by mortgage liens, tax liens, leases, and other restrictive contracts which are dependent upon the maintenance of the boundary lines between individual plots of property.

The Land Utilization Committee, in a very early stage of its studies, determined to seek facts and to make an economic analysis of the condition of individual properties, especially in depreciated sections. Approximately 80 blocks in New York's notorious Lower East Side were surveyed in detail and data were gathered concerning mortgages, general income and outgo, vacancies, physical condition of the properties, and the expenditures for maintenance and taxes considered as a percentage of gross income. In another section of the City, in the Negro belt of Harlem, a similar study was made covering 40 blocks. Here, however, additional material was gathered to relate gross rents paid to the income of occupants of the buildings. Details were gathered respecting family incomes in 16 blocks. Income was broken down by types of heads of families and others earning income; rent was then expressed as a percentage of family income. The third section of the City selected was a one- and two-family neighborhood in the Borough of Queens where comparisons were possible between rented and owned homes and the high cost of prevailing financing methods.

After gathering the field data, functional studies were started. For example, some 1,600 of the so-called "old law" tenements (built prior to 1901) were analyzed for the cost of maintenance. Buildings were classified by percentage of occupancy and by size. It was readily demonstrated that even with 100% occupancy the cost of maintaining this antiquated type of narrow, ill ventilated, and unsanitary building was exorbitantly high. Maintenance costs were found to run from 30 to 70% of gross rents and to amount to double and treble the amounts paid in taxes to the City, which latter costs have been held to be so burdensome to owners of real estate, especially in congested sections.

The conclusions to be drawn from the material gathered by the Land Utilization Committee and such functional interpretations as have been completed, all point clearly to a need for group action and group cooperation on the part of owners. A department of the work has already taken up a study of the legal obstructions to such type of action. Two test blocks have been selected. Meetings of owners were called and the proposal laid before them that the entire block should be united for rehabilitation and improvement. The owners of Block 330-B formed a committee which has been holding regular meetings. A method for appraising and apportioning the differing interests of owners and mortgagees has been worked out and drafts have been made of a certificate of incorporation and by-laws. The owners' committee in this initial block is convinced that far more will be possible through joint action on the part of the

owners than through a program which contemplates taking the properties away from the owners and the rebuilding of blighted areas by governmental agencies. When property is taken, there must be given, according to the American Constitution, just compensation, and compensation includes payment for the potential or future value of which the owner is deprived as well as for the loss of present use of the property. For this reason, any program of taking by a governmental agency involves high capitalization, whereas joint action by owners does not build up new burdens which must be paid for before the use of the property can be changed.

The work of the Land Utilization Committee has thus developed from an analytical examination of particular groups of depreciated properties into a series of analytical studies of obstacles in the way of property improvement. The program aims to lessen the economic difficulties which have done harm to real estate and restricted its development. It aims to set up new machinery to break down the barriers against cooperative action on the part of a neighborhood, and it aims to create a machinery for expressing and maintaining community standards. It seeks its objective through pointing out that pooling of properties for improvement is worth while and more economical than present individual operation. The program is based on the belief that the day has come when property will have value only for the service which it can render. The operation of property for income will become generally more important and more profitable than continued speculative sale and turnover. It is believed that property can be operated in large units by stock corporations and the sale of the stock of going enterprises will become the means for transferring ownership rather than the present system of selling and reselling individual parcels of real estate for speculative gain.

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Recent National Legislation Affecting Home Financing

EVERY session of Congress since 1931 has enacted important legislation having to do with the system of financing the buying, building, repair, or owning of homes. The present session of the 74th Congress is no exception. On May 28, 1935 the signature of President Roosevelt completed the enactment of H. R. 6021, Public No. 76 "to provide additional home mortgage relief, to amend the Federal Home Loan Bank Act, the Home Owners' Loan Act of 1933 and the National Housing Act, and for other purposes."

In addition to the major changes discussed here, this Act provides a number of minor amendments in the operation and administration of the Federal Home Loan Bank System, Home Owners' Loan Corporation, Federal Savings and Loan Insurance Corporation, Federal Savings and Loan System, and the Federal Housing Administration. The principal purpose of these changes was to improve the operation and usefulness of these governmental agencies by incorporating into them those things which experience had shown to be useful or necessary.

Probably the most important section of this Act is Section 11 which increased the authorized bond issue of the HOLC from $3,000,000,000 to $4,750,000,000 and at the same time definitely prevented the Corporation from accepting further applications for relief-refinancing loans beyond a period of 30 days after the signing of the Act. On November 15 the Board of Directors of the HOLC announced that they would accept no more applications because servicing those already on file would require all the $3,000,000,000 previously authorized. The additional bonding capacity of the HOLC given it by H. R. 6021 was intended to permit it to make all eligible loans for which applications had been filed up to November 6, and further, if eligible, applications received in the 30-day period after signing of the Act.

This period expired on June 27, 1935. Accordingly, the HOLC may now take no more applications and definite steps have been taken to terminate the relief-of-mortgage-distress activities of the Corporation and to confine it to the collection and liquidation of loans previously made. While complete figures are not available as to the funds needed to serve eligible applications received in that 30-day period, it is generally understood that not nearly so many

were received as were anticipated. It is expected that the increased borrowing capacity will be more than adequate to carry out the direction of Congress, so that the HOLC will not need to ask again for further funds. This means that home financing is being returned to private institutions.

Possibly next in importance is Section 17 which makes available $300,000,000 of the total authorized bond issue of the HOLC to be used for investment in savings, building and loan associations, whether they operate under state or Federal charter and without discrimination in favor of Federally chartered associations. The purpose of this section is to help bridge over the period when the HOLC ceases its operations and the time when private home-financing institutions have available from the general public sufficient funds to take care of all demands for sound home-mortgage loans. So long as this $300,000,000 is available, those local home-financing institutions which are in sound condition will have adequate funds to meet home-mortgage needs in their communities. In this way semi-government funds for home financing will be made available through institutions already set up and equipped in experience and personnel for sound, businesslike operation.

Section 7 contains a rather important amendment to the Federal Home Loan Bank Act. It authorizes such banks to make advances to non-member mortgagee institutions upon the security of mortgages insured under Title II of the National Housing Act. To be eligible to secure such advances, mortgagees must be "chartered institutions having succession and subject to the inspection and supervision of some governmental agency and whose principal activity in the mortgage field must consist of lending their own funds." Essentially, this was intended to mean commercial banks, savings banks, insurance companies, and similar financial institutions rather than the usual type of mortgage company which is not supervised by a governmental agency. Inasmuch as it apparently is impractical to expect private capital to form national mortgage associations to create any sort of national market for mortgages insured under Title II, this provision was intended to give a possible source of liquidity for such mortgages held by financial institutions. Advances may be up to 90% of the unpaid principal of the mortgages given as security.

Sections 23, 24, 25, and 26 amend Title IV of the National Housing Act which established the Federal Savings and Loan Insurance Corporation to insure accounts in savings, building and loan associations. The most important amendment is reduction of the premium to be paid for such insurance from ¼ of 1% of the total amount of the accounts of its insured members to ⅛ of 1%. The possible additional assessment is also reduced from ¼ to ⅛ of 1%. This and some minor amendments will undoubtedly make insurance of accounts more attractive to many building and loan associations. Except for associations organized under Federal charter, not many institutions have had their accounts insured because of what was felt to be excessive cost and unduly restrictive measures in the original Act. Increased participation in the insurance-of-accounts program should bring a larger flow of public funds to these institutions, thus increasing the amount of home-financing funds available.

Section 28 amends Title I of the National Housing Act so that loans for repair and modernization purposes, which will be given free insurance by the FHA, may be made to the amount of $50,000 instead of $2,000, the previous limit. However, the $2,000-limit still holds so far as repair and modernization loans on homes are concerned. The amounts up to $50,000 are permitted on real property such as apartments, hotels, office or other commercial buildings, hospitals, colleges, or manufacturing or industrial plants. It was thought that a substantial amount of repair and modernization work and consequently of employment in the construction fields could be stimulated if these larger projects were undertaken. Accordingly, the possibilities of Title I in increasing employment are expanded by this change but the FHA loses some of its emotional appeal as an agency primarily concerned with the problems of the home owner.

Section 30 amends Title III of the National Housing Act which provided for the incorporation of national mortgage associations. Such associations may now be organized with a capital stock of as little as $2,000,000; the previous minimum was $5,000,000. Also, such national mortgage associations are authorized to issue 12 times

the aggregate par value of their outstanding capital stock in notes, bonds, debentures, or similar obligations whereas the previous limit was 10 times. This amendment was intended to make it easier to form national mortgage associations. In spite of the often expressed thought that the RFC might furnish most or all the capital for one or more such national mortgage associations, private capital has so far not been sufficiently interested to undertake their organization.

In general, the legislation in H.R. 6021 has been very constructive. Practically all of it is pointed toward additional use of private capital in home-mortgage financing. While the effects of this legislation will be of long-run rather than emergency nature, its soundness should be beneficial in re-creating the home-mortgage system of the country.

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The Power of the Federal Government to Condemn Land for Slum Clearance and Low-Rent Housing

ON JULY 15, 1935 the United States Circuit Court of Appeals, Sixth Circuit, by a two to one vote, affirmed the decision of the District Court for the Western District of Kentucky, which had held that slum clearance and low-cost housing projects were not a public use for which the Federal power of eminent domain could be exercised.[1]

The court discussed three issues of law: (1) Is Congress authorized under the Constitution to levy a tax and make appropriations for a comprehensive program of low-cost housing and slum clearance? (2) Has the United States Government the right to exercise its power of eminent domain in order to carry out such a program? (3) Is the power given by the National Industrial Recovery Act to the President or his Public Works Administrator, to determine the details of such a program, an illegal delegation of legislative power?

The majority opinion, written by Judge Moorman, and concurred in by Judge Hicks, discussed all three questions but passed on only the second. In her dissenting opinion, Judge Florence Allen found squarely in favor of the Government on all three issues.

Since the majority of the court did not pass upon the preliminary question of whether the Federal Government has power to engage in slum clearance or low-rent housing projects, this point may be disposed of briefly. The majority failed to find in that part of the Constitution which gives Congress power "to lay and collect taxes . . . , to pay the debts and provide for the common defense and general welfare of the United States" (Article I, Section 8, Clause 1) the necessary authority for the slum clearance and low-cost housing activities of the Federal Government. Judge Allen in her dissent took the opposite view, citing many activities of the Federal Government for which Congress now imposes taxes and makes expenditures but which are not specifically provided for in the Constitution. The court dismissed the matter with the statement: "Assuming but not conceding, that the Government has the power to engage in slum clearance and low-cost housing enterprises, does this power carry with it the right to exercise its power of eminent domain?"

Under the Fifth Amendment to the Constitution of the United States, private property can only be condemned for a "public use." The court pointed out that the liberal interpretations of "public use" cited by counsel for the Government were made in cases involving the validity of state legislation in which the primary question was whether the legislation violated the Fourteenth Amendment to the Constitution of the United States. The court said:

"The term 'public use' as applied to the Federal Government's power of eminent domain is not susceptible of precise definition under the Supreme Court decisions. It includes, of course, property needed for use by the public through its officers and agents in

[1] The opinion of Judge Dawson in the lower court is reported in *United States of America v. Certain Lands in the City of Louisville, etc.*, 9 Fed. Supp. 137 (1935). For a discussion of that decision and of the decision of a New York Court in *New York City Housing Authority v. Muller, et al.*, see comment by Coleman Woodbury, 11 *Journal of Land & Public Utility Economics* 195 at 196 (May, 1935). The article also contains the facts in the Louisville case.

performing their governmental duties. [Citing authority.] The trial court was of opinion that it means use by the Government in carrying out its legitimate governmental functions, or a use in relation thereto open to all the public though practically available only to a part of it. The Government contends that it means any use which will promote the general welfare through benefits or advantages conferred upon a considerable number of residents of the community . . . "

"Decisions dealing with condemnation proceedings are to be considered in the light of the powers possessed by the sovereign seeking to exercise the right. What is a public use under one sovereign may not be a public use under another. [Citing authority.] The state and federal governments are distinct sovereignties, each independent of the other and each restricted to its own sphere. [Citing authority.] Neither can invade or usurp the rightful powers or authority of the other. [Citing authorities.] In the exercise of its police power a state may do those things which benefit the health, morals and welfare of its people. The Federal Government has no such power within the states . . . Thus in these and other cases involving state action the court dealt with the subject of public use as it pertained to the powers of the sovereign claiming the right to take. It must be similarly dealt with in the case at bar. As so considered with reference to the Federal Government, it does not, in our opinion, include the relief of unemployment as an end in itself or the construction of sanitary houses to sell or lease to low-salaried workers or residents of slum districts."

In other words, the majority refused to uphold the contention of counsel for the Government, that the federal power of eminent domain may be exercised to aid or effectuate the purposes of any legitimate program of the Government. On this point, Judge Allen said:

" . . . 'but there is a domain which the States cannot reach and over which Congress alone has power; and if such power be exerted to control what the States cannot it is an argument for—not against—its legality.'

"The problem of slum elimination throughout the nation lies within a domain which the individual states cannot reach and over which the Congress alone has power. This is an argument for—not against—the legality of this enactment so far as it constitutes an exercise of the taxing power to provide for the general welfare. Here the Congress, in my judgment, is exercising a power expressly conferred and ceded to it by the states in taxing and making appropriations for these purposes."

Slum clearance and low-rent housing ventures, said the majority, would create a new resource for employment of labor and capital, would enable many residents of the community to improve their living conditions and these group benefits might be beneficial to the general public so far as it affects them. Such a purpose does not constitute a public use, said the court:

"If, however, such a result thus attained is to be considered a public use for which the Government may condemn private property, there would seem to be no reason why it could not condemn any private property which it could employ to an advantage to the public. There are perhaps many properties that the Government could use for the benefit of selected groups. It might be, indeed, that by acquiring large sections of the farming parts of the country and leasing land or selling it at low prices it could advance the interest of many citizens of the country, or that it could take over factories and other businesses and operate them upon plans more beneficial to the employees or the public, or even operate or sell them at a profit to the Government to the relief of the taxpayers. The public interest that would thus be served, however, cannot, we think, be held to be a public use for which the Government, in the exercise of its governmental functions, can take private property. The taking of one citizen's property for the purpose of improving it and selling or leasing it to another, or for the purpose of reducing unemployment, is not, in our opinion, within the scope of the powers delegated to the Government."

The dissenting opinion meets this contention by stating:

"The specific question is narrow in scope. It does not involve nor hint at the condemnation of farm land nor the operation of factories. It is whether a national low-cost housing and slum-clearance project involves a public use. In my opinion taxation and appropriation by the Congress are authorized under Article I, Section 8, Clause 1, for low-cost housing projects to relieve unemployment so wide-spread as that which existed when this Act was passed, and this constitutes a public use. However, apart from the purpose declared in the statute, of creating nation-wide employment, this property is sought to be taken for a public use. Low-cost housing and slum-clearance subserve a public purpose, and when national in scope, they fall within the constitutional powers of the National Government.

"The slum is the breeding place of disease and crime. Also slum clearance cannot be completely effected without low-cost housing. If disease and crime are to be rooted out of slum neighborhoods, the residents must be placed in homes which they can rent or buy. The wrecking of the rookeries must be followed by new and inexpensive housing.

"The Congress had declared that this is a public use. A declaration so made will be respected by the courts unless the use be palpably without reasonable foundation."

It has often been pointed out that no satisfactory definition of public use can be formulated. As a result, the courts decide each case on its own merits. The District Court chose to adopt the "narrow view" which limits public use to use by the Government itself or a use or service open to all or a part of the public as a matter of right. Theoretically, the Circuit Court of Appeals adopted neither the "narrow view" nor the "liberal view." It simply came to the conclusion that the purpose for which the land in this case was desired was not a public use.

It is submitted that the reasoning of the majority is rather weak. It proceeds on the basis, that, if housing is a public use, then

there is no limit to what can be called a public use and eventually a taking by the Government of all private property for almost any purpose for which the public would benefit in some way, would be upheld.

In view of the desirability of deciding each case on its own merits, the fears of the majority seem properly disposed of by Judge Allen's dissenting remarks that only slum clearance and low-rent housing were involved in this case. The District Court below, like the majority in the Circuit Court of Appeals, had indulged in the same kind of reasoning. The answer to it was well expressed by Mr. Coleman Woodbury in discussing the decision of the lower court in the May, 1935 issue of this *Journal*, when he said:

> "It seems to me that this same argument could be used with equal force against condemnation for railways, power lines and other generally recognized public uses. Two of the chief characteristics of these recognized public uses are: (1) they are uses essential to the healthy, economic and social life of the country (which may or may not be true of the industrial use); and (2) much more significantly, they could not be successfully carried on under most circumstances without the power of eminent domain for acquiring the needed property. Practically no consideration is given to these points in the opinion of the Court."

If the *reductio ad absurdum* argument is to be the test for public uses it is unlikely that any taking, not of a type already established by judicial decision, could be allowed, in either federal or state cases. It is true that most of the liberal decisions as to what constitutes a public use have involved state legislation, but there seems to be no valid reason why the same liberal principles enunciated by the Supreme Court in those cases should not be applicable to cases involving federal public uses. The Supreme Court of the United States has upheld the taking of private property by the Federal Government for a game bird reservation, and has upheld the taking of the Gettysburg Battlefield for a memorial park, on the theory that they were public uses. The *reductio ad absurdum* theory is more than applicable to those cases.

The majority of the court was not impressed with the finding by Congress that the projected program was a public use. Apparently also, it did not apply the doctrine that legislation is presumed to be constitutional unless the violation of constitutional rights is conclusively shown. In the opinion of the writer, the doubt as to whether the federal housing program is for a public use would more than justify a decision in favor of the constitutionality of the legislation.

Limitations of space do not permit a discussion of the question as to whether the legislation authorizing the housing program was invalid as an illegal delegation of legislative power. The majority indicated some doubt on the point, while the dissenting judge upheld the validity of the provisions. In any event, the defect, if any, is not fundamental, as new legislation could cure it.

It is important that a final determination be had as to whether the Federal Government can engage in slum clearance and low-rent housing projects, and if it can, whether or not it can exercise its power of eminent domain. For this reason an early appeal to the Supreme Court of the United States is desirable. In the meantime the present program can be continued to a large extent. In the cases where it is necessary to condemn property in order to assemble the needed land, the condemnation can be undertaken in the state courts, by state or city governments or their appropriate agencies, such as housing authorities. It can also be undertaken under recent legislation enacted in several states, which grants the Federal Government the power to use state condemnation for public works projects.

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GEORGE S. WEHRWEIN, *Editor*

Michigan Enacts a Rural Zoning Law

FOR over 20 years those conversant with conditions in northern Michigan have pointed repeatedly to the clear and overwhelming evidence of malutilization of the region's natural resources and the resultant maladjustment of the political and social communities there. Major evidence is the ten million acres of tax delinquent land, the thousands of abandoned farms, the many disappearing and decaying villages, decreasing population, fifteen million acres of cut-over and fire scarred forest land, the rising cost of local government, and the confiscatory taxes.

This evidence led the Michigan Academy of Science 15 years ago to recommend as a first step that "an inventory of the idle land Districts be taken," which presently resulted in the organization of the Land Economics Survey Division of the State Department of Conservation. This Division gathered and compiled such evidence for 10 years, but not until a few years ago was public opinion deemed sufficiently strong so that the director of the survey dared to analyze and to interpret the data without fear of discrediting his entire fact-finding organization. Wisconsin by that time had adopted a rural zoning law, and it became increasingly apparent that a similar step would have to be taken in Michigan.

Then, last winter the Land Use Advisory Committee of the State Planning Commission, after being approached by a newly elected senator of the minority party, drafted the necessary bill—not so much in the hope of securing passage of the measure at this year's session of the Legislature, as in hope that the educational effort and publicity might result in its passage at some succeeding session. The technical sponsors underestimated the weight of the many years of evidence and the bill not only became a law during this session but secured unanimous support in both houses and with the signature of the Governor became Public Act 44, Session of 1935.

The new act is not considered a perfect piece of statute writing because political strategy dictated that a township zoning law (P. A. 79, 1929) applying only to buildings be made the vehicle for the new measure. Nevertheless, the act gives broad and basic authority to zone for any or all natural resources on a county or inter-county basis. Individual townships have no control over zoning which should avoid the pernicious influence against public interest by small selfish groups who might prevent adequate and proper zoning in particular localities.

However, to secure local support, the principle of rural zoning, but not the specific zoning ordinance, must be approved by a majority vote at a county-wide referendum in which voters of incorporated places participate before any zoning in that county can become effective. Voting on the principle rather than the specific ordinance should prevent petty bickering over technical details and specific provisions which might easily lead to popular disapproval.

Under the law it is possible in the unincorporated portions of counties to regulate and restrict the location of industries and buildings and to restrict and determine the areas within which given forms of land use would be prohibited or encouraged. The county would be divided into districts of such number, size, and shape as necessary and regulations imposed in each " . . . designating the use of land for trade, residence, recreation, agriculture, forestry, soil conservation, and water supply conservation . . . ", the purpose, of course, being " . . . to promote public health, safety and general welfare . . . and the conservation of property values and natural resources . . . ."

The adoption of a specific plan and zoning restrictions for any county lies within the power of the county board of supervisors. However, before any zoning ordinance can become operative it must be approved by the State Planning Commission. That body is authorized to cooperate in preparing plans with the county planning committee, a committee of from three to seven members appointed by the county board of supervisors, but it cannot force the supervisors to adopt any plan they do not approve of. Nevertheless, the State Plan-

ning Commission's veto power will protect the State's interest and where ordinances are adopted insure that they are sound and for the public good. In this way it will be possible to coordinate effectively the plans of adjacent counties.

State participation in the enactment of rural zoning ordinances is perhaps more vital here than in a state like Wisconsin, because of the large areas of state land which in Michigan would be affected by such zoning provisions.

All zoning ordinances before becoming effective must be presented at a public hearing previously advertised in an official paper or a paper of general circulation in the county. Revisions of a zoning ordinance follow through the same procedure as the original ordinance. Appeals from a specific provision of the ordinance are heard by a joint board of appeals made up of an equal number of members of the county planning committee and State Planning Commission.

It is hoped that this state act will facilitate the withdrawal of marginal areas from agricultural production under the A. A. A., in addition to the usual benefits accruing to zoning legislation, such as lower governmental costs, more effective governmental service, protection of rural investments, elimination of the exploitation of ignorant land users, concentration of rural settlement, all improving the social and economic status of the community.

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A Farms Area Map of Wisconsin*

LAND economists, planners, and geographers constantly use land utilization maps of states or regions. Basic to making an official zoning map in a rural county are maps showing forest land, land in farms, recreational land, and tax delinquent land. These are usually large detailed maps showing every description of land as found on the assessment and tax rolls of the county. Land utilization maps for larger areas must be based on more general data, such as Census and Crop Reporting Service figures. The most common of such maps is a "dot" map in which a given dot indicates a certain acreage of crops, or an acreage of cultivated land or woodland. Maps of this kind can be used to show the exact location of the land in question but cannot show the exact proportion of the area occupied by this land use unless the dot scale is made proportionate to the map scale. Many dot maps are thus too heavily dotted in relation to area upon the map; some are too lightly dotted.

Occasionally land economist and geographer need a map which shows the exact proportion of the area of a given political unit or region in various land uses but for which adequate basic data are not in existence. For instance, in connection with the land planning work of the National Resources Board in Wisconsin numerous maps were prepared showing data by civil towns. To complete the series of maps and to make possible regional comparisons between the Northern Cut-Over Region of Wisconsin and the agricultural sections of the State, it was necessary to construct a map showing the proportional part of each civil town included within farm boundaries. The town, which is the rural minor civil division in Wisconsin as in New England, is the unit upon which all maps had been constructed. The area of land in farms by towns was available in the published reports of the *United States Census*; what was lacking was the area in acres of these minor civil divisions. If this were known, it would have been a simple matter to calculate the percentage of the town in farms and to show the proportion by appropriate map methods.

The area of the 1,280 towns of Wisconsin had not been determined with the degree of accuracy needed for the farms area map but the task is not impossible, and is being carried on at the present time under the joint auspices of the Crop Reporting Service and the College of Agriculture of the University of Wisconsin.

Wisconsin, in common with all states west of the Appalachian Highland except Kentucky, Tennessee, and Texas, has the government land survey of 36 square mile townships. These 6-mile-square government

* The accompanying map was prepared in the winter of 1934-5 under the auspices of the National Resources Board. At the time the writer was serving as Wisconsin Land Planning Consultant for that Board.

townships should not be confused with the towns, which are merely subdivisions of the counties for purposes of government. Many of the towns, especially in southeastern and north-central Wisconsin, correspond exactly in size and shape with the government townships. In cases of this sort it is comparatively easy to determine the area of the town, because the acres in the township are recorded with the plat in the Land Office at Washington and the State Land Office in Madison. The area of many towns, particularly in southeastern Wisconsin, can be obtained in this way. The area may also be easily obtained for towns whose areas comprise two or more government townships.

Ideally, each government township should contain the sum total of the sections, each with 640 acres, or 23,040 acres. Actually, such is not the case, for many complications hinder attainment of the ideal. For instance, the civil town of Summit, Langlade County, corresponds to government township 33 north, range 9 east, but its area is 23,155 instead of 23,040 acres. The original survey of the government townships was carried out in many places in a difficult terraine, in dense forests, or was complicated by the existence of numerous lakes and swamps, to say nothing of the known difficulties of surveying the square units upon the earth's surface, with resulting necessary correction lines. As a consequence of these factors or combinations of them, the vast majority of government townships contain an area somewhere between 22,000 and 23,000 acres. A few townships near correction lines, or with "slanting" section lines, actually exceed 23,040 acres, and in one part of Wisconsin reach a total of 26,000 and 27,000 acres. The concentration of lakes in the Northern Highland of Wisconsin, particularly in the Vilas and Oneida County district, reduces the land area of some of the government townships to 17,000 acres or less. The surveyors used different practices in treating lake shore sites. Some lakes have been meandered in detail and excluded from the land area; other lakes were merely included within the section in which they happened to fall. Lake lots of varying sizes were laid out within the State, and must be included in calculations of area.[1]

Another problem arises whenever the town consists of more or less than a government township, or when it consists of parts of several townships with some of the parts mere subdivisions of sections or individual lots. The only way in which the area of such an "irregular" town can be calculated is to add the area of the lots, descriptions, sections, and townships that happen to constitute the town. This can be done fairly accurately from the surveyors' plats which have on them the areas of lake lots and of those descriptions with more or less area than the usual 40-acre piece or quarter section (160 acres), and it has been done for those northern counties in which land utilization surveys have been made.

Many of the minor civil divisions of the Northern Cut-Over Region and of the rough unglaciated area of western Wisconsin are highly irregular in shape. The irregularities in the north are further complicated by the presence of lakes, while in western Wisconsin a few of the towns have boundaries that correspond to the trends of valleys or ridges, with resulting "zigzag" borders. It must also be remembered that the surveys were made a hundred years ago in some parts of the State, and under difficult conditions. A resurvey today might result in considerable acreage changes for some townships. The discrepancies are the most marked in the northern lake regions. However, all public records are based upon the descriptions and areas of land as found on the original survey plats and remain in this form unless an official resurvey changes the legal descriptions.

For complete accuracy, the area of any incorporated village or city should be subtracted from the area of the town or towns in which they lie but accurate areas of municipalities are known only approximately at this time. Roads, railroads, cemeteries, and other non-agricultural uses of land will affect the final figures if the calculations are carried to tenths or hundredths of a per cent.

The method used to obtain a map of the State showing land in farms on a town basis was to calculate the area of farms in each town, as determined from the *United States Census*, and place a square of proportionate size upon the accurate new federal base map

[1] For an illustration of an original survey and lake frontage lots see Chart I in George S. Wehrwein and Robert F. Spilman, "Development and Taxation of Private Recreational Land," 9 *Journal of Land & Public Utility Economics* 340-351 at 342 (November, 1933).

showing minor civil divisions. The square was usually placed in the southwest corner of the town, except where an irregular unit forced a change from the type. Throughout most of southern, eastern, and western Wisconsin the towns are almost completely filled in, showing the preponderance of farm land, but in the northern and central portions of the State much area is left as nonfarm (Map I).[2]

The calculations and maps were based on a known town of standard size as follows:

Millimeters	Square	Factor	Acres	Acre Range
1 =	1 x	250 =	250	Less than 500
2 =	4 x	250 =	1,000	500– 1,500
3 =	9 x	250 =	2,250	1,500– 3,000
4 =	16 x	250 =	4,000	3,000– 5,000
5 =	25 x	250 =	6,250	5,000– 7,500
6 =	36 x	250 =	9,000	7,500–10,500
7 =	49 x	250 =	12,250	10,500–14,000
8 =	64 x	250 =	16,000	14,000–18,000
9 =	81 x	250 =	20,250	18,000–22,500
10 =	100 x	250 =	25,000	22,500–27,000
11 =	121 x	250 =	30,250	27,000–33,000
12 =	144 x	250 =	36,000	33,000–38,000
13 =	169 x	250 =	42,500	38,000–45,000
14 =	196 x	250 =	49,000	45,000–52,000
15 =	225 x	250 =	56,250	52,000–60,000

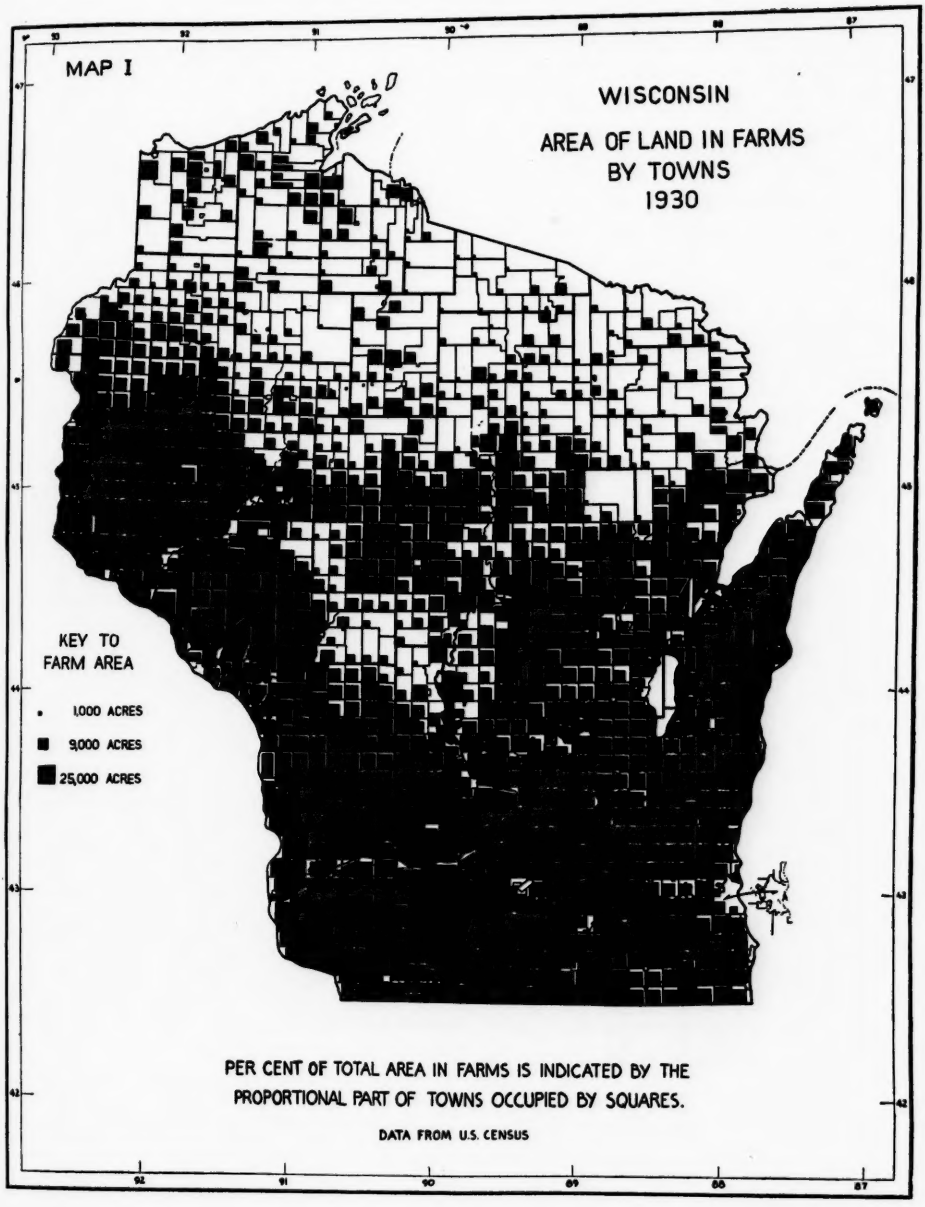
The fourth column indicates the acreage represented on this particular base map by any size square; 36,000 acres, for example, are represented by a 12 millimeter square. The actual measurement of the squares on the base map was, however, further complicated by the irregular shapes of some towns which have a high farm acreage, necessitating considerable further figuring to keep a proper areal relationship within the irregularity. The disadvantage of the increasing acre range in the higher brackets is not as great as may be supposed from a cursory examination of the table because of the infrequent occurrence in Wisconsin of total farm acreages per town much in excess of 21,000 to 22,000 acres. Only 18 towns in the State have total farm areas between 24,000 and 25,000 acres, and 101 exceed the latter figure. However, only 10 exceed 40,000 acres of farm land, all of them highly irregularly shaped towns in the rough Driftless Area of western Wisconsin. Of the 10, but 2 have more than 50,000 acres in farms. Furthermore, when very large total farm acreages occur, they are in well settled towns having a high percentage of total area in farms, so the town is nearly covered by the square or rectangle in any event. For example, of the 101 towns previously mentioned as having farm acreages in excess of 25,000 acres, 60 are in the Driftless Area of western Wisconsin and 16 in northwestern Wisconsin. The remaining 25 are scattered in central and eastern Wisconsin. Not one is in the Northern Cut-Over Region.

Geographically the method has obvious disadvantages in that the location of the square on the map and the actual location of the farm land in the town are not necessarily at the same place; this is particularly true of the Northern Cut-Over Region. However, the approximate location of the farm land is known from other sources, and can be presented upon a dot map. An important advantage of this particular type of map is that it shows true relative conditions between diverse regions, northern and southern Wisconsin, something that a percentage type of map based upon area of land in farms (not total area) is unable to do. It is also possible to construct a map of this type to present relative conditions when isopleth maps cannot be constructed upon a total area base because of lack of essential data. This particular map is used merely as supplementary to many other maps of all types, but it does contribute a special part to fundamental work in the study of regions and the land problems of these regions.

The farms area map presents in areal relationship (1) the proportion of each Wisconsin town within farm boundaries, and (2) relative conditions between the two very diverse regions of the Northern Cut-Over section of the State and the southern agricultural districts, where town areas are almost entirely included in farms. The sparsely settled sand-marsh plain in central Wisconsin also stands out upon the map. The relative picture that is presented is thus based upon total land area, rather than upon area of land within farms, a base commonly used in much geographical work.

The large number of villages and cities in southeastern Wisconsin are reflected on the map by the decreasing proportion of farm land in certain sections of that part of the State. This is especially true of the immediate shore of Lake Michigan, but is also the case throughout much of the southeastern quarter of Wisconsin. Small lake and resort regions also stand out, as the

[2] Data are of the census year 1930.



Oconomowoc region to the west of Milwaukee, the Lake Geneva area near the Illinois state line, Lake Koshkonong, and others. Where a single city occupies considerable area it is, of course, reflected upon the map; or combinations of factors, such as the City of Madison and Lake Mendota, account for the small proportion of land in farms in the town of Madison.

Western Wisconsin has most of its land

area within farm boundaries. The lack of lakes in this unglaciated portion of the State and the smaller total number of cities and villages result in a relatively higher total farm percentage.

The east-west agricultural belt across north-central Wisconsin that lies between the Central Sand Plain and the Northern Cut-Over Region is strikingly shown. Certain towns of this belt have nearly the total farm acreage of southeastern and southwestern Wisconsin, as may be seen from the map, but the majority of the towns in this more recently settled region do not have quite the same amount of land within farm boundaries as do the older sections of the State. Certain towns of this east-west belt have distinctly less agricultural land, explainable by a variety of reasons, but mainly the result of various features of the natural environment.

The Northern Cut-Over Region and the western part of the Central Sand Plain of Wisconsin stand out as the two areas of least total agricultural land and of least relative land area in farms. Both of these regions are also districts which contain much "problem land." The farms area map relates the total farm area of these towns to total area; other maps, constructed on a "land-in-farms" basis, can indicate relative conditions upon the farms themselves. Within these two regions the map thus shows relative areal conditions from town to town, knowledge of which is fundamental in planning land use in the region.

The pictorial representation of the agricultural land of a given region is necessary for geographer and land economist alike. In a region of scattered occupancy, such as the Northern Cut-Over Region, detailed surveys to show actual land use and specific locations should follow, and are most necessary, but a state-wide map to represent not only regional conditions, but to permit regional comparisons upon the same base, is essential to the study of any area.

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The Indiana County Planning Law

AT the last session of the General Assembly of Indiana an act was passed authorizing the county commissioners of any county to appoint a county planning commission.[1] The act is an enabling statute, and not mandatory upon the several counties. According to the law, the county planning body would be composed normally of seven members, including one member of the board of county commissioners, the county surveyor, and four citizen members selected by the board of county commissioners. In addition to these members the county agricultural agent would be a member by virtue of his office and, where there is a city plan commission existing in the county, it would select one of its members to serve as a member of the county board. The appointive members would serve overlapping terms of four years each and as is usual with such boards, the members would serve without pay except for necessary expenses.

The county planning commission is authorized to appoint and fix the compensation of technical, clerical, and administrative employees, with the consent of the board of county commissioners. Provision is also made for cooperation with other official agencies in performing the duties of the commission.

The wording of the County Planning Act is very similar to that used in the law which established the State Planning Board. The mission of each of these boards is the same and through the operation of the county planning commissions it will be possible to carry out the objectives of planning in greater detail. Section 3 of the Act, therefore, restates in substantially the same form the objectives set forth in the State Planning Act as follows:

"For the purpose of providing that healthful, convenient, safe and pleasant living conditions may be assured in situations throughout the county and state, affording abundant opportunity for the proper utilization of natural resources and the talents and ability of all individuals in a manner profitable to each; and in order that the people of the county and the state of Indiana may realize the greatest possible benefit from the natural, agricultural, industrial, and other resources of the county and state, including minerals, soils, lands, forests, fisheries, wild life and recreational facilities, water resources, rivers and harbors, manufacturing and mechanical industry, wholesale and retail trade, educational and institutional facilities, and com-

[1] Senate Bill No. 265 (1935).

munication and transportation facilities, including highways, and including such distribution of population and of the uses of the land within the county and state as will tend to reduce the wastes of physical, financial or human resources, which result from either excessive congestion or excessive scattering of population, the county planning commission of any county is hereby empowered to cooperate with and assist the state planning board in its duties:

"1. To make enquiries, investigations and surveys concerning the resources of all sections of the county.

"2. To assemble and analyze the data thus obtained and to formulate plans for the conservation of such resources and the intelligent and systematic utilization and development thereof.

"3. To make recommendations from time to time as to the best methods of such conservation, utilization and development.

"4. To cooperate with the National Resources Board or other agencies of the United States government, with other states or territories and their agencies, and with the departments of the State of Indiana and all other public agencies of the state in such planning, conservation, utilization and development of resources."

The act provides further that it shall be the duty of the county planning commission to make and adopt a master plan for the physical and economic development of the county. The plan in each case, accompanied by maps, charts, and descriptive matter, will show the commission's recommendations for development of the county. These proposals may include the general location, character and extent of highways, conservation measures of many kinds, aviation fields, drainage and sanitary systems, transportation and communication provisions, and public buildings and institutions. It is clearly set forth that these recommendations should include those elements which are distinctly of a county nature as distinguished from those of merely local municipal importance. It is also provided that the master plan may include "a land utilization program, including the general classification and allocation of the land within the county amongst mineral, agricultural, soil conservation, water conservation, forestry, recreational, industrial, urbanization, housing and other uses and purposes."

Provision is made for the adoption of portions of the plan from time to time and for the enforcement of the plan after it is adopted. The enforcement clause provides:

" . . . after the adoption of the county master plan . . . then and henceforth no county highway, park, forest, reservation or other county way or ground or no county building or structure or property shall be constructed or acquired with county funds, or located, constructed or authorized by any county board, official or department unless the proposed location and extent thereof shall have been submitted to the county planning commission and the report and advice of the commission thereon shall have been received . . . " (Sec. 7).

Administrative heads of other departments may depart from the official master plan, but only after filing in writing, for public inspection, their reasons for such departures.

The county planning commission is also charged with the duty of preparing a 10-year program of public works covering all major county improvement projects. Provision is made for the annual revision of this plan to extend it one year into the future. The purpose of the public works program is to stabilize employment by promoting the planning and timing of public works and by the elimination of unplanned, untimely, unnecessary, and extravagant projects.

The statements regarding zoning are brief. The exact wording of the law is as follows:

"The Commission may, for the benefit and welfare of the rural and suburban areas of the county, prepare and submit to the board of county commissioners drafts of ordinances for the purpose of carrying out the master plan, or of any part thereof, including zoning or land use regulations, the making of official maps and the preservation of the integrity thereof, and including procedure for appeals from decisions made under the authority of such ordinances, and regulations for the conservation of natural resources of the county, and the Board of County Commissioners is hereby authorized and empowered to adopt such ordinances."

In Indiana the procedure for municipal zoning has been well established. Considerable similarity will obtain between county zoning ordinances and those of cities. On the other hand, a pioneering element is involved and it was felt that a definite delegation of the police power, in brief form, would be more appropriate than a lengthy recital of procedure at this stage. Doubtless some ordinances will be prepared under this authority during the next two years. In these ordinances procedure will be set out in detail to meet the particular situations and the general form of the ordinances established in this manner. If it is felt desirable, a later meeting of the General Assembly could be asked to include this procedure as a part of the enabling act. There is general realization in many parts of the State of the importance of county zoning and of its value in promoting the best use of all types of land.

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The Supreme Court Sheds More Light upon the Doctrine of Fair Value!

AGAIN the Supreme Court of the United States, speaking through Mr. Justice Roberts,[1] lays hold of that hardy perennial, the doctrine of a fair return upon fair value for rate-making purposes, and leaves it mired once more in the ever deepening bog of legal technicalities. Those who had hoped that the controversy over the meaning of this concept had at length attained firmer ground in the Los Angeles Gas & Electric Corporation decision[2] must feel a keen disappointment to find the Court wallowing again in the historic muck.

After extended hearings and investigations the Public Service Commission of Maryland entered an order November 28, 1933 directing the Chesapeake and Potomac Telephone Company of Baltimore to put into effect reductions in its rates sufficient to diminish annual net income by $1,000,000. Enforcement of this order was enjoined by a decree of the Federal District Court from which the Commission appealed. The Commission had fixed the value of the property at December 31, 1932, including an allowance for working capital, as $32,621,190. After estimating the amount of net revenues available and allowing for a reasonable return of 6% upon the rate-base, it found a surplus net revenue of $1,396,522. Because of a rise in the general level of prices during 1933, the surplus deemed available for rate reduction was reduced to $1,000,000. The company claimed a higher annual allowance for depreciation than that fixed by the Commission and a return of 7%. The District Court had found a value of $39,541,921, also a higher depreciation expense, and had accordingly estimated that the return under the order would be 4½%, instead of 6%, which it held confiscatory.

The basic value figure adopted by the Commission was for 1923 and taken from a decision of the District Court. It exceeded book value by some $6,000,000. Mr. Justice Roberts points out that

> "the commission made no appraisal of the physical plant and property but attempted to determine present value by translating the dollar value of the plant as it was found by the District Court in 1923, plus net additions in dollar values in each subsequent year, into an equivalent dollar value at Dec. 31, 1932."

The translation was accomplished by means of 16 price and cost indexes prepared to show price trends. This price adjustment maneuver, designed to obviate the expense and delay of another appraisal, is summarized with comments by Dr. E. W. Morehouse elsewhere in this issue of the *Journal*.

The District Court held that the method of determining present value by means of indexes was inappropriate. On its part the lower court

> "purported to consider both book cost and reproduction cost; but in fact, as plainly appears from the opinion, derived present value by the use of two figures only,—book cost as at Dec. 31, 1933 ($50,025,278), les the entire depreciation reserve shown by the book ($11,483,357),—and thus fixed value at $38,541,921."

The Supreme Court asserts flatly: "We are not satisfied with the methods pursued either by the Court or the Commission."

The Commission's method is condemned as inappropriate for obtaining the value of a going telephone plant because (1) the indexes were not prepared as an aid to the appraisal of property, and (2) the wide variation of results of the employment of different indexes impugns their accuracy as implements of appraisal. The Court dislikes the use of indexes weighted "upon a principle not disclosed" which renders the valuation process "dubious and obscure."

What the decision amounts to is a reaffirmation of the historic position of the Court that the "fair value" is the "present value" in the ascertainment of which investment or actual cost and reproduction cost—together with all other elements

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[1] *West et al. v. Chesapeake and Potomac Telephone Co. of Baltimore City*, U. S. Supreme Court, October Term, 3194, No. 648, decided June 3, 1935.

[2] *Los Angeles Gas & Electric Corp. v. Railroad Commission*, 289 U. S. 287 (1933).

affecting value—are to be given their proper weight in the final conclusion. The Court is definite in stating that the method here employed of measuring reproduction cost by means of price indexes which reflect spot prices of labor and material gives too much weight to "sudden fluctuations in the price level."

The District Court's method is subject to the infirmity that it uses book costs at a time when the price level is markedly lower and attempts to correct for this by deducting the depreciation reserve built up on a straight-line basis which is admittedly in excess of the observed and accrued depreciation at the valuation date. The method is condemned as a "rough and ready approximation of value," as arbitrary as that of the Commission because "unsupported by findings based upon evidence." The decree of the Court is confirmed though its method is condemned.

Mr. Justice Stone writes the minority opinion in which Justices Brandeis and Cardozo join. They believe the decree should be reversed because in their view of the case there was grave doubt whether the charge of confiscation had been sustained. The argument of the dissenting opinion is even more technical than that of the majority but it comes to this: Since the methods of both the lower court and the Commission were condemned, and the company had likewise failed to give convincing evidence of confiscation, the order of the Commission should stand. Moreover, since the company had merely sought to sustain the decree of the lower court, the judgment of the Supreme Court upon the record should have been to reverse the decree below because the method adopted by the court in testing for confiscation was adjudged unsound.

The minority opinion defends the Commission in its use of price indexes with telling effect, yet this portion of the argument is not material. But it is of the highest significance to students of public utility regulation to find the minority pointing out that "in no case hitherto has this Court assumed to set aside a rate fixed by a State Commission, not found to be confiscatory, merely for what it conceived to be an erroneous method of valuation." In *Los Angeles Gas & Electric Corp.* v. *Railroad Commission* (289 U. S. 287) the order of the Commission was upheld because it was in fact non-confiscatory, even though the Commission had used the prudent investment method of fixing fair value, which had been repeatedly disapproved. This principle that the Court will not interfere with the legitimately exercised discretion of the Commission which had raised such hopes is now beclouded in legal doubt and uncertainty.

What light does this decision shed upon the doctrine of fair value? What help does it give administrative commissions in following this will-o'-the-wisp which has been infesting these legal lowlands since 1898? Since that date they have learned that the will-o'-the-wisp is *not* the historical cost, is *not* the nominal capitalization, is *not* the capitalization of net income or the aggregate of the market value of securities, is *not* the cost of reproduction, taken by themselves alone; but is some uncertain *combination* of all of them, weighted according to circumstances. In the attempt to supply weights, the commissions have been told that they must not use the "split inventory method," that spot prices will not do, that 10-year price averages are faulty, and now that the method of index numbers renders the valuation process "dubious and obscure." This they do know, that it will not be safe to rely upon short-cuts, without the tacit consent of the utilities. To be safe, both parties must hire costly experts and engage in lengthy investigations, while critics of regulation make sport of the whole process by saying, after an order is finally sustained: "The mountain has labored and brought forth a mouse."

Meanwhile economists and others have neither failed nor tired of pointing a way out. The present writer followed up an early suggestion made in 1923 by a lengthy treatise in 1927 which, it seems, never dented the legal armor. Only the other day, an economist and a lawyer joined in pointing a similar way out of the difficulty by building upon the principle of the Los Angeles Gas & Electric decision and an explicit statutory rule of rate-making. In reviewing this book, I ventured to suggest that this procedure would not meet with the requisite self-denying attitude of the court. Now the very groundwork of such procedure has disappeared.

The situation is, to say the least, discouraging. The continued unwillingness of

the Supreme Court of the United States to accept the judgment of economists, in what the minority calls the most speculative undertaking imposed upon them in the entire history of English jurisprudence, does not promise much for that helpful cooperation between the social sciences which jurists in their more lucid moments are prone to suggest.

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Price Trends in the Baltimore Telephone Case

AMONG the reasons assigned by the majority of the Court in *West* v. *Chesapeake & Potomac Telephone Company of Baltimore*[1] for upsetting the Commission's order was the inappropriate use of price indexes in determining a rate-base. The chief indictment related to the weighting of 16 indexes of price trends in finding a "trend of fair value" since the last Commission and Court finding in 1924. This weighting, the Court said, was done "upon a principle not disclosed" and "known only to itself." This "rendered its process of valuation even more dubious and obscure."

It may be interesting, therefore, to summarize the indexes used, the weight attached thereto, and the values resulting (Table I). The Commission's report does not clearly state the basis for the weights chosen. Mr. Justice Stone, speaking for the minority of the Court, notes: "Since some of the indices were more accurate than others, and since some were more directly applicable to telephone property, they were assigned greater weights. It is clear that these were the considerations which influenced the Commission's judgment as to the approximate weighting."

The most inclusive and probably most accurately computed index was given the highest weight. Two special purpose indexes relating particularly to telephone property were given the next highest weights. Five construction cost indexes, with resulting values varying from lowest to highest by not more than 10%, were given a combined weight of 9½, nearly ⅛ of the total weights. These construction cost indexes plus the telephone property indexes received over ½ the weight. It would appear, therefore, that the accuracy and comprehensiveness of the indexes as well as their applicability to the property involved and the purpose in view were dominant considerations.

The point might be made that the weighting was merely a convenient tool used in

[1]—U. S.—, 79 L. ed.—, 55 S. Ct. 894.

TABLE I. SUMMARY OF INDEXES USED, WEIGHTS ASSIGNED, AND RESULTING VALUES IN THE BALTIMORE TELEPHONE CASE

Identification of Price Trend	Weights	Depreciated Value
U. S. Dept. of Labor, All Commodities	4	$30,458,180
National Association of Purchasing Agents—Commodities	2	25,410,849
Dr. Irving Fisher's Trend—Commodities	1	28,681,140
Dun's Trend—Commodities	1	33,581,993
Bradstreet's Trend—Commodities	1	24,983,624
Average of Five Commodity Trends		$28,623,157
Engineering News-Record—Construction	2	$35,009,281
American Appraisal Co.—Construction	2	32,623,549
Richey (Old Series)—Construction	2	35,783,737
Consolidated Engineering Co.—Construction	2	34,092,828
Turner Construction Co.—Construction	1.5	33,153,303
Average of Five Construction Trends		$34,132,540
U. S. Dept. of Labor—Building Materials	2	$33,140,626
National Association of Purchasing Agents—Building ing Materials	1	29,965,050
Average of Two Building-Materials Trends		$31,552,838
Federal Reserve Bank of New York—General	2	$36,056,408
Chas. W. Smith—Baltimore Wages	1.5	30,918,858
U. S. Dept. of Labor—Building Materials and Baltimore Wages	0	32,369,324
I. C. C.—Railroad, Telegraph and Telephone Lines	3	32,024,463
Co. Exhibit 35, Western Electric Company prices, Less increase since 1929	3	34,567,634
Composite Trend by Accounts	0	31,108,325
Maryland Commission's Fair Value Trend		$32,610,327

exercising judgment as to value. It was not essential to that exercise of judgment. One wonders what the Court's opinion of the value judgment would have been if the separate trended values, stated without weights, had been used and the final value judgment expressed thereon. Would the Commission's judgment figure then have been impeached merely because trends had been examined in reaching a conclusion? Would the method in that event have been found faulty, and hence the result unconstitutional? In this connection, the Commission noted in its brief that no deduction was made for excess plant not used and useful for present patrons, and that a "cushion" of $396,000 (equivalent to 6% on an additional $6,600,000 of rate-base) was also provided. After all, as the minority point out, the range from highest and lowest individual trend value to the average fair value trend used is not very wide. Indeed, it is narrower than the range between many engineering estimates, after complete inventorying and pricing of the property, in comparable cases. It is not clearly shown how the weighting process has impaired the Commission's judgment value.

If the Commission erred in its weighting method, did not the company likewise err? The company used indexes in its valuation. Some of these indexes were derived from appraisals of samples ranging from 1% to 20% of particular classes of plant. The values of these samples were applied to the remaining items in the respective classes of property. This method likewise involves a species of weighting, but it is a commonly used method. Except for the classes of plant being more homogeneous within themselves, is this weighting by sample much more accurate than the Commission's weighting method?

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Utility Depreciation Practices under Commission Scrutiny

DIRECT commission control of depreciation rates and annual depreciation allowances has been vigorously undertaken by the Nebraska and Wisconsin commissions. Hitherto, the fixing of depreciation rates and depreciation allowances has been the almost exclusive prerogative of utility management, except as these matters have been reviewed from time to time in general rate cases. The Nebraska Commission has issued orders[1] fixing composite depreciation rates for Nebraska Class A and Class B telephone companies and more recently the Wisconsin Commission established class depreciation rates for Wisconsin Class A telephone companies.[2] The Wisconsin Commission has also under way depreciation investigations of the major Wisconsin gas and electric utilities and is organizing a special section of its staff to carry on this work. Other commissions have also recognized the importance of the depreciation problem and have been making investigations.

Direct commission control of depreciation follows years of growing public interest in depreciation practices of utilities. For many years, regulatory commissions supervised utility depreciation through prescribed accounting classifications but without material success. Not until 1920, however, was sentiment for regulating annual depreciation charges crystallized to a point of enactment into specific law. The Transportation Act of 1920 provided that the Interstate Commerce Commission should, as soon as practicable, prescribe the classes of property for which depreciation charges may properly be included in operating expenses, and the percentages of depreciation which shall be charged with respect to each of such classes of property. Subsequently, a number of state commissions have been given authority to establish utility depreciation rates either by express statute or by expansion of powers to prescribe accounting classifications and regulations.

The mandate of Congress to regulate depreciation of interstate carriers has not yet been fully carried out by the Interstate

[1] *Re Northwestern Bell Telephone Co.*, 5 P. U. R. (N. S.) 21; *Re Lincoln Telephone & Telegraph Co.*, 6 P. U. R. (N. S.) 81; *Re Nebraska Continental Telephone Co.*, General Order 59, N. S. R. Com.

[2] *Re Wisconsin Telephone Company*, 2-U-502; *Re Commonwealth Telephone Co.*, 2-U-748; *Re Community Telephone Company*, 2-U-749; *Re North-west Telephone Company*, 2-U-751; *Re LaCrosse Telephone Corporation*, 2-U-750, all as of April 30, 1935.

Commerce Commission. After 10 years of detailed investigation, the Commission issued a final report and order on depreciation in Docket No. 14700 dated July 28, 1931 (177 I. C. C. 458), defining classes of depreciable property and establishing general principles of depreciation accounting. This report also outlined the procedure by which the Commission expected to prescribe reasonable depreciation rates, but no rates were actually determined in the order. The effective date of the 1931 depreciation order was thrice postponed by the Interstate Commerce Commission for one-year periods. In 1934, with the depreciation matter still pending, the Federal Communications Commission was vested with the Interstate Commerce Commission's jurisdiction over interstate business of telephone companies and since then the effective date of the 1931 depreciation order was postponed, first for another year, and finally for an indefinite period.[3]

The continued hesitancy of Federal commissions to prescribe depreciation rates for interstate carriers may reflect complete understanding of the complexities involved rather than incompetency or neglect of duty. The Interstate Commerce Commission is not entirely responsible for its mandatory jurisdiction over depreciation. It is contended that this task was forced upon the Commission by an act of Congress. Investigations so far made clearly demonstrate the difficulties of Federal control over depreciation, and it appears doubtful that a Federal commission can be equipped to cope properly with the variety of local conditions affecting depreciation requirements. In so far as telephone utilities are affected, the Federal Communications Commission will have an opportunity to suggest modification of the Congressional depreciation mandate in the telephone regulatory legislation to be recommended to the next Congress.

State regulation of utility depreciation is off to a more propitious start. Excepting Massachusetts,[4] state commissions were only recently given authority to regulate utility depreciation coincident with the movement to revitalize commission regulation. The depreciation orders of the Nebraska and Wisconsin commissions are the first results.

The 1934 order of the Nebraska Commission prescribing a 3½% depreciation rate for Northwestern Bell Telephone Company already has been tested in the Nebraska Supreme Court which sustained the Commission.[5] The other depreciation orders have not been reviewed by the courts.

The depreciation investigations of the Nebraska and Wisconsin commissions were instituted for the same purposes: to prevent over or under charging for annual depreciation by establishment of proper depreciation rates and to cooperate in the depreciation studies of the Federal Communications Commission. Telephone companies were first to come under this phase of regulation primarily because of the substantial depreciation charges which many of these companies make to operating expenses. Annual depreciation allowances of many telephone utilities are as much as 25% of total operating expenses. The importance of such an item in determining reasonable telephone service rates is obvious.

The Nebraska and Wisconsin commissions both sponsor straight-line depreciation accounting under which loss in service value of physical property attributable to exhaustion of service capacity is charged to operating expenses in monthly or annual instalments, as equal as may be, over the service life of the property. The orders of the Nebraska Commission prescribe only composite rates for each company, while the Wisconsin Commission established separate depreciation rates for each primary depreciable plant account. The class depreciation rates established by the Wisconsin Commission composite to 3.5 to 4% of depreciable property, the variation among companies resulting from differences in operating conditions, size and number of exchanges, nature of territory served and relative composition of fixed capital by classes. The composite rates authorized by the Nebraska Commission range from 3 to 3.5% with the variation resulting from the above factors and also the relationship of present depreciation reserve to existing depreciation.

The procedures followed by the Nebraska

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[3] Federal Communications Commission, Docket No. 2552, Depreciation Charges of Telephone Companies, Order No. 10-B, dated May 1, 1935.

[4] Mass. Laws 1921, c. 164, § 5A.

[5] *Northwestern Bell Telephone Company v. Nebraska State Railway Commission*, 259 N. W. 362 (March 1, 1935). To be appealed to U. S. Supreme Court (*Telephony*, July 13, 1935).

and Wisconsin commissions in prescribing depreciation rates are similar. The companies involved were required to submit estimates of depreciation requirements and adequate detailed supporting data. These estimates were checked by commission representatives and, where necessary, independent analyses made. Informal agreements were sought on differences between company and commission estimates. Formal hearings were conducted in cases where differences of judgment and theory could not be successfully arbitrated. Finally, formal orders were issued certifying reasonable percentage rates.

The orders of both commissions call attention to the necessity of correlation between the accrued depreciation reserve and existing depreciation deductible in rate cases. After pointing out the wide discrepancy between the Northwestern Bell Telephone Company's reserve balance (26.8%) and estimated existing depreciation (12%), the Nebraska Commission said:

"Rate payers should be required to pay for capital consumption. They should not be required to pay for capital contribution and then be required to pay a return upon their own contributions."

The Wisconsin Commission emphasized the same point in criticizing the Wisconsin Telephone Company's 30% reserve balance contrasted to less than 10% existing depreciation as determined by the Company's engineers. These orders serve notice that no longer can utilities expect to include depreciation in operating expenses on one theory and deduct depreciation for rate-base purposes on some other and inconsistent basis.

Both commissions answer the question of conflict between state and Federal jurisdiction by the statement that Congress, in authorizing a Federal commission to fix depreciation rates, did not presume to grant Federal control over depreciation rates involved in intrastate telephone service. The commissions point out the importance of proper depreciation expense in determining reasonable telephone rates and contend that state rate control is out of the question without direct state jurisdiction over this important factor in cost of service.

The Nebraska Commission is of the opinion that depreciation rates for the future should be reduced to correct gradually excessive reserve balances. No adjustment was made for this factor in the rates prescribed by the Wisconsin Commission, but the orders clearly imply that such adjustments may be found necessary in the future. To facilitate checking against excessive reserves, the Wisconsin Commission's order fixing depreciation rates of Wisconsin Telephone Company also requires the establishment of separate reserves for each primary plant account. The Commission apparently believes that errors in class depreciation rates will show up readily in the account reserve balances and thus facilitate proper readjustment, either up or down. This method of accounting was also contemplated by the Interstate Commerce Commission's 1931 depreciation order.[6]

In prescribing depreciation rates for the future, both commissions recognized the recession in telephone development since 1931 and the reduced effects of inadequacy as a factor of depreciation caused by reduced telephone growth and the existence of excessive spare plant capacity. The loss of 15 to 25% of telephone subscribers during the depression has given most companies ample plant for a very considerable period in the future.

The Wisconsin Commission criticizes consideration of proposed future additions to existing buildings and central office installations in estimating current rates of depreciation. This method is used by most of the Bell System telephone companies. The Commission takes the position that this practice leads to excessive accruals and is unfair to subscribers in that it requires payment in present service rates for an estimated accruing loss of investment not yet made. The revised classification of telephone accounts of the Federal Communications Commission, which was issued after the date of the Wisconsin depreciation orders, also definitely prohibits this practice.

The Wisconsin Commission's orders also discuss in some detail the relative weight to be given mortality experience and forecasts of conditions in the future. The Commission apparently believes that substantial weight should be given recent rates of plant retirement and conditions expected in the near future and less consideration should be given long-range forecasts and mortality

[6] Interstate Commerce Commission, Docket No. 14700, Depreciation Charges of Telephone Companies, 177 I. C. C. 458.

experience for periods long since past. Under the Wisconsin theory, depreciation rates would reflect substantially the currently effective factors influencing depreciation requirements with changes made from time to time as changes in conditions become manifest. The thought is that close correlation with actually existing influences will serve to eliminate errors resulting from difficult predictions of an unknown distant future. It appears that this plan, if successfully carried out, may solve the leading disadvantage of the straight-line method of depreciation.

Examination of the depreciation orders so far issued shows, on the whole, a fair approach by the state commissions. The Wisconsin Commission explains that it has a dual responsibility in the matter of determining proper annual depreciation requirements:

"Too large an allowance places an unfair burden on the service rates of subscribers . . . If the depreciation allowance is too low, impairment of capital is possible, which usually results in financial difficulties for the utility and deterioration of service to its customers. The Commission is unwilling that regulation of depreciation rates in Wisconsin shall result in either of these conditions."[7]

These orders indicate that state commissions have begun establishing their control of utility depreciation on a going basis. It may be expected that other commissions will soon exercise similar jurisdiction over this problem.

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[7] *Re Wisconsin Telephone Company*, 2-U-502, p. 12.

Management Fees in California

IN *City of San Diego* v. *San Diego Consolidated Gas & Electric Company* (39 C. R. C. 279) decided by the California Railroad Commission February 4, 1935, that Commission, in a rate case, met and definitely disposed of the vexing problem of holding company management and engineering fees. The opinion, prepared by Commissioner William J. Carr and approved by the entire Commission, presents an able and complete discussion of rate-making as now practiced by the California Commission. The rates fixed by the order were placed in effect by the Company after a petition for rehearing had been denied.

The Company supplies electric, natural gas, and steam service in San Diego and in those parts of San Diego County where these services are offered. Natural gas service had been substituted for manufactured gas service in September, 1932 and it was conceded that the deficiency in earnings from the gas business should be made up by the electric department, and the property, revenues, and expenses treated as a single problem.

The complaint in this case was filed by the City and substantial reductions in rates for electricity and natural gas were asked. Appraisals of the property were made by both the City and the Company on historical, and reproduction cost new and depreciated, bases. Historical cost and reproduction cost estimates, exclusive of overheads, were very close together and the reserve for accrued depreciation and the estimated accrued depreciation were each approximately 20% of historical and reproduction cost respectively.

While the Commission did not depart from what may be called the traditional California method of rate-fixing—that is, an undepreciated rate-base (substantially the historical cost of the used and useful property) and 6% sinking fund annual depreciation included in operating expense—yet an alternative fair value rate-base was set up, based upon cost to reproduce less depreciation, with 6% sinking fund annual depreciation augmented by interest at the 6% rate on the amount of depreciation deducted. The return to the Company was found to be practically the same under either method.

Neither the undepreciated rate-base of $36,000,000 nor the depreciated rate-base of $28,750,000 included any additive sum for going value. It was held that the property was valued as a going and functioning utility, including certain units of property of doubtful usefulness, and in addition substantial allowance was made in operating expense for promotional and developmental expenditures.

Standard Gas and Electric Company owns slightly over 99% of the common stock of the San Diego Company. The San Diego Company had standard form 2½% management and 7½% engineering con-

tracts with Byllesby Engineering and Management Corporation, a wholly owned Standard Gas and Electric subsidiary. Much evidence was offered by the Corporation to support the reasonableness of the payment and the value of the services rendered. The right of the Commission to scrutinize carefully the contracts was conceded and the real question concerned the right of the Corporation to obtain a profit on the service rendered. The Commission, recognizing the useful and valuable character of the services rendered, held squarely that the cost of the service should be the measure of the compensation to the affiliated corporation. The management fee was fixed at $70,000 per annum, or practically 1% of the revenues. A rate for the engineering fee was not fixed but the Commission deducted $1,360,000, representing 55% of the Byllesby engineering fee included in historical cost overheads, from the historical appraisal of the Company. In effect, the Commission reduced the rate-base by a sum held to represent the intercompany profit which had accrued during the period that the relationship had been maintained.

Rate case expense and donations and dues were included in expense in somewhat lesser amounts than claimed, and it was held that the Company had recovered, through prior earnings, the costs incurred in the cut-over to natural gas in 1932, although on the books of the Company the cost had not yet been entirely written off to expense. Gas revenues were estimated for the future on a temperature adjusted basis.

A return of 6⅔% on the traditional undepreciated rate-base set-up was found reasonable. The Commission held that if any profit should accrue to the holding corporation it must go to them in the open, by way of rate of return, and not as a profit on top of the cost of the services rendered, "a feature of the system which unless remedied is likely to break down the very system itself."

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Recent Court Decisions Threaten Established Unit Rule of Ad Valorem Taxation of Public Utilities in Wisconsin

WHEN Wisconsin abandoned the method of taxing railroads by assessing a license fee on the basis of gross receipts and substituted the ad valorem system whereby railway operating property was valued as a unit and subjected to a tax based on the average state rate, the railroad companies immediately brought action to test the constitutionality of this new method of taxation. The Wisconsin Supreme Court by Chief Justice Marshall in *Chicago and Northwestern Railway Co.* v. *the State*[1] rendered a sweeping opinion in favor of the constitutionality of the ad valorem method. The court there said[2]: "It appears that the better way to promote that equality and justice to all, which the constitution guarantees, is to maintain the integrity of the unit system in its entirety in treating railway property for taxation . . . ".

Section 76.02(1) of the statutes provided that the property of a company shall include all property used or employed in the operation of the business whether owned, leased, or otherwise. For over a quarter of a century it has been the established practice of the Wisconsin Tax Commission to assess taxes on leased properties against the operating company. In two comparatively recent decisions the Wisconsin Supreme Court has shown a tendency to limit application of the unit rule.

In 1931 the Wisconsin Legislature exempted motor vehicles from general property taxation. Chapter 70 is the general property tax law. Public utility property is classed as special property being covered in Chapter 76 and exempted from general property taxation as a rule. The effect of exempting motor vehicles from general property taxation was to exempt all motor carriers and companies doing business as common carriers solely by motor vehicles. The Wisconsin Tax Commission assessed the busses and other motor vehicles of companies operating bus lines in conjunction with the conduct of an electric, gas, or similar utility. In *Wisconsin-Michigan Power Co.* v. *Tax Commission*[3] the Supreme Court

[1] 128 Wis. 553 (1906).
[2] *Ibid.*, p. 676.
[3] 207 Wis. 547 (1932).

upheld the lower court's ruling that busses operated by the appellant company should be treated the same for assessment and taxation purposes as like property of other independent bus transportation companies. The inclusion of such motor vehicles for assessment and taxation purposes under Chapter 76 by the Tax Commission was held erroneous. Thus the properties of such companies as the Wisconsin-Michigan Power Company could no longer be assessed as a unit. The Legislature has since exempted all motor vehicles owned by utilities, thus necessitating a further modification of the unit rule.

A much more drastic opinion was handed down last summer in the Soo Case (*Minneapolis, St. Paul and Sault Ste. Marie Railway Co., respondent* v. *Robert K. Henry, Treasurer, et al., Appellants*).[4] The Soo Railway Company in 1909 entered into an agreement with the Wisconsin Central Railway, the agreement being denominated a lease for 99 years in the nature of a contract whereby the Soo Company agreed to operate the Wisconsin Central properties. A receiver for the latter company was appointed in 1932. The receiver entered into a contract with the Soo Company whereby the Soo Company agreed to operate the Wisconsin Central lines, keep separate accounts of the earnings of the two companies, and pay over to the receiver the net earnings of the Wisconsin Central Company.

When the Soo Company was notified that the Tax Commission had assessed all properties operated by the Company as a unit and that the taxes were levied against it, the Soo Company protested and petitioned for separate assessment so that it could be assessed on its own property only. The Soo Company admitted owning a majority of the common stock of the Wisconsin Central Company, $10,000,000 of said Company's bonds, and virtually all the preferred stock, as well as standing in the position of guarantor of $16,000,000 additional in bonds.

In spite of the manifest intercorporate relationship, as well as the fact that the Soo Company was operating all the properties and thus apparently subject to assessment for taxes as a railway company defined in section 76.02(1), the Supreme Court held that a separate assessment of the properties should have been made. The decision must have been founded upon principles of equity. The court evidently based its opinion on a distinction of corporate ownership rather than operation, thus allowing a contract between companies to overrule the wording of the statute. The court said: "In our opinion, when one railroad company is operating the property of another for the benefit of both companies the statutes discussed require a separate assessment of the property so operated, and do not authorize any other than a separate assessment of such property." The court opined that the fact that the Wisconsin Central property was in the hands of a receiver was an additional reason for separate assessment.

If this decision is sound, it appears that the unit rule based on operation will no longer be accepted and that a unit rule based on corporate ownership may be in evolution. The possible complications arising from such a situation are many. The Milwaukee Electric Railway and Light Company may insist on a separate assessment of the Lakeside property leased by them from the owner, the Wisconsin Electric Power Company. It may be feasible to incorporate operating divisions of the various railways and power and light companies separately, operate by lease, and work out contracts which will compel separate assessment by the Tax Commission. Over half a century ago the same problem arose in connection with the graduated gross receipts tax on railroads. The matter of leased property in relation to the application of the unit rule of ad valorem taxation may grow to be a very troublesome and litigious one, if the utility companies were to attempt to take full advantage of the opportunity opened to them by this decision.[5]

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[4] 216 Wis. 668 (1934).

[5] The problem of leased property was briefly touched upon in "Some Solved and Unsolved Problems of Public Utility Taxation in Wisconsin" by Harold M. Groves and George M. Keith, 10 *Journal of Land & Public Utility Economics* 110-1 (May, 1934).